

Technical program

Monday, April 28

SESSION A – Processing I

Chairmen: A.M. Gavin and F.V.K. Young

10:30 a.m., Sutton Room

- 10:30 INTRODUCTORY REMARKS – A.M. Gavin
- 10:35 1 – WHAT'S NEW IN FATS & OILS PROCESSING. J.V. Landis
- 10:55 2 – PHYSICAL REFINING OF AFRICAN MAIZE OIL. A. Forster and H.J. Nel
- 11:15 3 – TECHNICAL CONSIDERATIONS ON THE FAT SPLITTING, DISTILLATION, FRACTIONATION, AND HYDROGENATION PROCEDURES. E. Bernardini and M. Bernardini
- 11:35 4 – THE IMPACT OF THE PREPARATION AND EXTRACTION CONDITIONS OF SOYBEANS ON THE OIL QUALITY. T.L. Ong
- 11:55 5 – TIRTIAUX FRACTIONATION: THE FLEXIBLE WAY TO NEW FATS. A. Tirtiaux
- 12:15 6 – DETERGENT FRACTIONATION OF FATS AND OILS. A. McCabe and H. Nilsson

SESSION B – Effect of Heating on Fat

Chairmen: Rex J. Sims and Gerhard Billek

10:30 a.m., Gramercy A

- 10:30 INTRODUCTION – Rex J. Sims.
- 10:35 7 – HIGH PERFORMANCE LIQUID CHROMATOGRAPHY OF THERMALLY OXIDIZED OLIVE OIL TRIGLYCERIDES. E.G. Perkins and A. El-Hamdy
Honored Student presentation
- 10:55 8 – THERMALLY INDUCED CYCLICS AND AROMATICS IN FATS AND FAT MODEL SYSTEMS. Pio Angelini
- 11:55 9 – THE INFLUENCE OF FEEDING ABUSED FATS ON THE INTESTINAL ABSORPTION OF ¹⁴C-THIAMIN IN THE RAT. E.G. Perkins and J. Lai
- 11:35 10 – ANALYSIS OF THERMALLY ABUSED SOYBEAN OIL FOR CYCLIC MONOMERS. J.B. Meltzer, E.G. Perkins, E.N. Frankel, and T.R. Bessler
- 11:55 11 – EVALUATION OF GROUNDNUT AND COTTONSEED OILS FOR DEEP-FAT FRYING. L.M. du Plessis, P. van Twisk, P.J. van Niekerk, and M. Steyn
- 12:15 12 – QUICK ASSESSMENT OF FRYING OIL QUALITY BY COLUMN CHROMATOGRAPHY. A.K. Sen Gupta and G. Guhr

SESSION C – Toxicity and Food Safety

Chairmen: David Firestone and W.E. Parish

10:30 a.m., Gramercy B

- 10:30 INTRODUCTION – David Firestone
- 10:35 13 – FOOD SAFETY FROM A COMPANY LAWYER'S VIEWPOINT. A.E. Johanson
- 10:55 14 – RESIDUE CONTROLS ON IMPORTED MEAT AND POULTRY. H.M. Steinmetz
- 11:15 15 – AFLATOXIN CONTROL – PAST, PRESENT, FUTURE. Leonard Stoloff
- 11:35 16 – TOXICITY TESTING GUIDELINES: ROLE IN RETROSPECTIVE SAFETY REVIEWS. V.H. Morgenroth, III
- 11:55 17 – FDA REGULATIONS TO ASSURE FOOD SAFETY. C.J. Kokoski

SESSION D – Palm Oil I

Chairmen: B. Jacobsberg and K.G. Berger

10:30 a.m., Beekman Room

- 10:30 INTRODUCTION – B. Jacobsberg
- 10:35 18 – SOLIDIFICATION BEHAVIOR OF PALM OIL. M. Naudet and E. Sambuc
- 10:55 19 – THE NUTRITIVE VALUE OF PALM OIL. J.J. Gottenbos and R.O. Vles
- 11:15 20 – THE CO-DOMINANCE THEORY: GENETICAL INTERPRETATIONS OF ANALYSES OF MESOCARP OILS FROM *ELAEIS GUINEENSIS*, *ELAEIS OLEIFERA* AND THEIR HYBRIDS. A.O.S. Hock, C. Chong-Cheng, and S.H. Pauh
- 11:35 21 – THE PALM OIL RESEARCH INSTITUTE OF MALAYSIA – A BEGINNING. K.G. Berger
- 11:55 22 – TECHNICAL COLLABORATION IN THE MALAYSIAN OIL PALM INDUSTRY. D.A.M. Whiting and K.G. Berger
- 12:15 23 – PALM OIL: PAST – PRESENT – FUTURE. B. Jacobsberg and M. Loncin

SESSION E – High Performance Liquid

Chromatography I

Chairmen: K. Aitzetmüller and Chi-Tang Ho

10:30 a.m., Regent Room

- 10:30 24 – RECENT PROGRESS IN THE HPLC OF LIPIDS. K. Aitzetmüller
- 11:10 25 – THE USE OF HPLC IN ANALYSIS OF A TRIGLYCERIDE MIXTURE. B. Herstöt
- 11:30 26 – ANALYSIS OF LIPIDS VIA A NEW LIQUID CHROMATOGRAPHY-MASS SPECTROMETRY-COMPUTER SYSTEM. W.L. Erdahl, W.R. Beck, D.E. Jarvis, and O.S. Privett
- 11:50 27 – HIGH PERFORMANCE LIQUID CHROMATOGRAPHY OF STEROIDS. E. Heftman and I.R. Hunter
- 12:10 28 – HIGH PERFORMANCE LIQUID CHROMATOGRAPHY OF BILE ACIDS. W.H. Elliott and R. Shaw

SESSION F – Soaps and Detergents I (Surface and Structural Chemistry of Surfactant Systems)

Chairmen: T.P. Matson and J.A. Monick

10:30 a.m., Murray Hill A

- 10:30 INTRODUCTION – T.P. Matson
- 10:35 29 – PHASE BEHAVIOR OF ALCOHOL ETHOXYLATE-OIL-WATER SYSTEMS AND ITS RELATIONSHIP TO DETERGENCY. R.C. Pierce and J.R. Trowbridge
- 10:55 30 – THERMAL REARRANGEMENT OF SULFATED TALLOW ALKANOLAMIDES. R.G. Bistline, Jr., and W.M. Linfield
- 11:15 31 – THE EFFECTS OF WATER HARDNESS ON SURFACE TENSION AND CONDUCTANCE PROPERTIES OF SOAP SOLUTIONS. Joan W. Koppenbrink
- 11:35 32 – CORRELATION OF INTERFACIAL TENSION AND DISHWASHING. T.P. Matson and G.D. Smith
- 11:55 33 – EFFECT OF QUATERNARY AMMONIUM SUBSTITUTION OF HYDROXYETHYLCELLULOSE ON BINDING OF DODECYL-SULFATE. K. Ohbu, O. Hiraishi, I. Kashiwa, and Isamu Kadoya

Continued on page 86A.

Monday (continued)**SESSION G – Lecithin I – Food Applications**

Chairmen: B.F. Szuhaj and I. Wilton

10:30 a.m., Murray Hill B

- 10:30 INTRODUCTION – B.F. Szuhaj
- 10:35 34 – THE APPLICATIONS OF LECITHIN IN THE FOOD INDUSTRY. W.R. Prosize
- 10:55 35 – USES OF LECITHIN IN CONFECTIONERY PRODUCTS AND FOOD DRINKS. B.W. Minifie
- 11:15 36 – LECITHIN: THE THINGS IT DOES, CAN (OR CANNOT) DO, AND CAN BE MADE TO DO IN BAKING. Y. Pomeranz
- 11:35 37 – THE USE OF LECITHIN IN RECONSTITUTING WHOLE MILK POWDER. A.J. Baldwin and W.B. Sanderson
- 11:55 38 – THE INDUSTRIAL USE OF SPECIAL LECITHINS. W. van Nieuwenhuyzen

SESSION H – Margarine

Chairmen: A. Moustafa and O. Korver

10:30 a.m., Gibson A&B

- 10:30 INTRODUCTION – A. Moustafa
- 10:35 39 – THE DETERMINATION OF VITAMIN D IN MARGARINE BY HIGH PERFORMANCE LIQUID CHROMATOGRAPHY. P.J. van Niekerk and S.C.C. Smit
- 10:55 40 – "QUALITY CONSIDERATIONS" MARGARINE OIL MANUFACTURING. S. Patel
- 11:15 41 – GRAS CHEMICALS AS AFFECTORS IN PRESERVATIVE SYSTEMS. J.J. Kabara
- 11:35 42 – EVALUATION OF THE FUNGISTATIC PROPERTIES OF LAURICIDIN & LAURICIDIN PLUS. A. Moustafa and J.R. Agin
- 11:55 43 – A COMPARISON BETWEEN THE CONDITIONS OF MANUFACTURE FOR A HYDROGENATED FISH OIL MARGARINE AND FOR A VEGETABLE OIL MARGARINE. C.H. Struble, A. Del Solar, and J. Gallo

SESSION I – Economics and Marketing of Animal Fats and Vegetable Oils

Chairmen: Kenneth E. Holt and E.C. Leonard

10:30 a.m., Rendezvous Room

- 10:30 INTRODUCTION – Kenneth E. Holtz
- 10:35 44 – RAPESEED ECONOMICS AND TRADE. Allen E. Earl
- 10:55 45 – SOY OIL – THE KING WITH NO CROWN. D.R. Erickson, D.G. Frahm, and Parry Dixon
- 11:15 46 – THE U.S. SUNFLOWER INDUSTRY PRODUCTION AND MARKETING OUTLOOK. Allen A. Housh
- 11:35 47 – THE COTTONSEED INDUSTRY: ECONOMICS AND MARKETING. J. Allen Ater
- 11:55 48 – ECONOMIC AND MARKETING OPPORTUNITIES IN THE ANIMAL FATS INDUSTRIES. Werner R. Boehme
- 12:15 DISCUSSION

SESSION J – Processing II

Chairmen: Jack Burkhalter and J. Podmore

2:00 p.m., Sutton Room

- 2:00 49 – "DIREX" APPLICATION OF THE DIRECT SOLVENT EXTRACTION SYSTEM ON VARIOUS HIGH OIL CONTENT SEEDS WITH PARTICULAR REFERENCE TO WET-MILLED CORN GERM. E. Bernardini and M. Bernardini
- 2:20 50 – DEHULLING OF OILSEEDS. F.W. Sosulski and R. Zadernowski

- 2:40 51 – A NEW METHOD OF DETOXIFICATION OF COTTONSEED BY MEANS OF MIXED SOLVENT EXTRACTION. F.K. Liu, S.Y. Jou, and L.Y. Jung
- 3:00 52 – FRACTIONATION/WINTERIZING OF EDIBLE OILS. P.C. Linnemann
- 3:20 53 – PILOT PLANT DESOLVENTIZING-TOASTING OF EXTRACTED SOYBEAN FLAKES—A PRELIMINARY STUDY. K.J. Moulton, G.C. Mustakas and E.C. Baker
- 3:40 54 – OVERALL TRAY EFFICIENCY IN CONTINUOUS EDIBLE OIL DEODORIZERS. A. González Flores and R. Sanz Castaños
- 4:00 55 – WIPED FILM EVAPORATOR PURIFICATION OF FATTY ACIDS FROM ACIDULATED SOAP-STOCKS. G.V. DeLaney
- 4:20 56 – PROCESSING AND PACKAGING CONSUMER PRODUCTS AT THE OIL REFINERY. R. Edmunds and F. Khyrn
- 4:40 57 – ENVIRONMENTAL ASPECTS OF SOLVENT EXTRACTION. N.W. Myers

SESSION K – Nutritional Effects of *trans* Isomers I

Chairmen: Fred A. Kummerow and Gunhild Højlmer

2:00 p.m., Gramercy A

- 2:00 INTRODUCTION – Fred A. Kummerow
- 2:05 58 – INFLUENCE OF *TRANS*-FATTY ACIDS ON THE METABOLISM OF *CIS* AND SATURATED ACIDS IN DEVELOPING BRAIN. Harold W. Cook
- 2:25 59 – PLACENTAL TRANSPORT OF *TRANS* FATTY ACIDS IN RATS. C.E. Moore and G.A. Dhopeshwarkar
- 2:45 60 – INCORPORATION OF POSITIONAL ISOMERS OF DIETARY *CIS*- AND *TRANS*-OCTADECENOIC ACIDS INTO TISSUE LIPIDS OF THE RAT. Kumar D. Mukherjee
- 3:05 61 – EFFECT OF A *TRANS* FATTY ACID (ELAIDIC ACID) ON THE THERMOTROPIC PROPERTIES OF A BACTERIAL MEMBRANE AND ITS LIPID COMPONENTS. J.D. Morrisett, H.J. Pownall, R.T. Plumlee, L.C. Smith, R.D. Yang, K.M. Patel, R.D. Knapp, L.A. Sklar, R.B. Crawford, Z.E. Zehner, M. Esfahani, and S.J. Wakil
- 3:25 62 – INCORPORATION OF ISOMERIC FATTY ACIDS IN EGG AND HUMAN BLOOD LIPIDS. Herbert J. Dutton
- 3:45 63 – EFFECTS OF *TRANS TRANS* LINOLEATE ON TISSUE LIPIDS AND SERUM PROSTAGLANDIN CONCENTRATIONS. J.E. Kinsella, J.L. Shimp and J. Mai
- 4:05 64 – EFFECT OF *TRANS* ACIDS ON THE METABOLISM OF LINOLEIC ACID IN THE RAT AND HUMAN. Robert L. Anderson
- 4:25 65 – EFFECT OF DIETARY *TRANS* FATTY ACIDS ON MEMBRANE LIPIDS: THE FATTY ACID COMPOSITION OF LIPIDS OF BRAIN AND LIVER MITOCHONDRIA AT BIRTH AND DURING POST NATAL DEVELOPMENT. J. Petterson and J. Opstvedt
- 4:45 66 – THE ATHEROGENIC EFFECT OF *TRANS* AND SATURATED FATTY ACIDS IN RABBITS. J.J. Gottenbos and R.O. Vles

SESSION L – Sunflower Oil and Protein

Chairmen: Hank Sandig and E.W. Lusas

2:00 p.m., Gramercy B

- 2:00 INTRODUCTION – Hank Sandig
- 2:05 67 – FACTOR AFFECTING WAX DETERMINATION AND REMOVAL FROM SUNFLOWER SEED OIL. W.H. Morrison III and J.A. Robertson
- 2:25 68 – SUNFLOWER SEED PROCESSING. Glen D. Brueske

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Monday (continued)

- 2:45 69 – SUNFLOWER OIL PROCESSING FROM CRUDE TO SALAD OIL. Frank E. Sullivan
- 3:05 70 – MODERN PROCESSING OF SUNFLOWER SEED. H.L.S. staff
- 3:25 71 – SUNFLOWER DEHULLING TODAY. Willi Fetzer and Jack A. Hostettler
- 3:45 72 – RECENT DEVELOPMENTS IN SUNFLOWER PROTEIN TECHNOLOGY. F. Sosulski
- 4:05 73 – SUNFLOWER SEED DEHULLING SYSTEMS. George M. Neumunz
- 4:25 74 – STUDY OF THE NEUTRAL LIPIDS OF SUNFLOWER ISOLATES. Francisco Millan, Eduardo Vioque and Ma. Pilar Maza
- 4:45 75 – RECENT DEVELOPMENTS IN THE PRODUCTION OF SUNFLOWER AND SUNFLOWER OIL IN HUNGARY. J. Hollo, E. Kurucz and J. Peredi

SESSION M – Palm Oil IIChairmen: **B. Jacobsberg and K.G. Berger**2:00 p.m., **Beekman Room**

- 2:00 76 – FRYING PERFORMANCE OF PALM OIL LIQUID FRACTIONS. U. Bracco, A. Dieffenbacher and L. Kolarovic
- 2:20 77 – SAMPLING OF PALM OIL. D. Jacqumain
- 2:40 78 – EXTRACTION AND FRACTIONATION OF PALM OIL. D.B. Bek-Nielsen and S. Krishnan
- 3:00 79 – A COMBINED FRACTIONATION PROCESS FOR PALM OIL. B.K. Tan, K.G. Berger, R.J. Hamilton and B. Jacobsberg
- 3:20 80 – FRACTIONATION OF PALM OIL. R. Kassabian
- 3:40 81 – THE COMPOSITION AND PHYSICAL BEHAVIOR OF INTERESTERIFIED FATS WITH SPECIAL REFERENCE TO PALM OIL. H. Kifli and F.D. Gunstone
- 4:00 82 – PALM OIL – ECONOMICS AND MARKETING. R.E. Miller

SESSION N – High Performance Liquid**Chromatography II**Chairmen: **Chi-Tang Ho and Kurt Aitzetmüller**2:00 p.m., **Reagent Room**

- 2:00 83 – COMBINED USE OF HPLC AND INFRARED DETECTION FOR THE QUALITATIVE EXAMINATION OF ANIMAL FATS AND VEGETABLE OILS. N.A. Parris
- 2:20 84 – PURIFICATION OF LIPIDS ON A 100 MG SCALE BY PREPARATIVE HPLC. W.S.M. Geurts van Kessel
- 2:40 85 – APPLICATION OF HIGH PERFORMANCE LIQUID CHROMATOGRAPHY FOR THE DETERMINATION OF THE GLYCERIDE COMPOSITION OF FATS AND OILS. A. Karleskind and M. Blanc
- 3:00 86 – THE TRACE DETERMINATION OF FATTY ACIDS IN SMALL BIOLOGICAL SAMPLES AFTER FLUORESCENCE LABELLING WITH BR-MMC. W. Dünjes, M. Höckel and B. Soltau
- 3:20 87 – HPLC ANALYSIS OF MINOR COMPONENTS IN OILS. E. Fedeli and N. Cortesi
- 3:40 88 – ARGENTATION HIGH PERFORMANCE LIQUID CHROMATOGRAPHY OF METHYL ESTERS. C.R. Scholfield
- 4:00 89 – SEPARATION OF GLYCEROL AND CHOLESTEROL ESTERS BY HIGH EFFICIENT LIQUID AND GAS CHROMATOGRAPHY. J. Coupek and P. Mares
- 4:20 90 – RAPID ANALYSIS OF SERUM LIPOPROTEINS BY HPLC. I. Hara, M. Okazaki, Y. Ohno and K. Sakane

SESSION O – Soaps and Detergents II (Evaluation and Properties of Soaps and Detergents)Chairmen: **H. Stupel and James Trowbridge**2:00 p.m., **Murray Hill A**

- 2:00 INTRODUCTION – H. Stupel
- 2:05 91 – THE STAIN REMOVAL INDEX (SRI): A NEW REFLECTOMETER METHOD FOR MEASURING AND REPORTING STAIN REMOVAL EFFECTIVENESS. O.W. Neiditch, K.L. Mills and G. Gladstone
- 2:25 92 – A MOTOR OIL SOIL FOR DETERGENCY TESTING. L. Matheson and G. Smith
- 2:45 93 – A PRACTICAL METHOD FOR THE EVALUATION OF FOAMING PERFORMANCE OF SOAP IN HARD WATER. Joan W. Koppenbrink
- 3:05 94 – EFFECT OF SURFACTANTS AND ENZYMES ON DETERGENCY. O. Okumura, H. Nishio, I. Amano and Kazuaki Fukano
- 3:25 95 – THE DETERMINATION OF OPTICAL BRIGHTENERS IN LAUNDRY DETERGENTS BY REVERSE PHASE AND ION PAIR HPLC. B.P. McPherson and N. Omelczenko
- 3:45 96 – ETHYLENE OXIDE OLIGOMER DISTRIBUTIONS IN NONIONIC SURFACTANTS VIA HIGH PERFORMANCE LIQUID CHROMATOGRAPHY (HPLC). M.C. Allen and D.E. Linder
- 4:05 97 – HPLC ANALYSIS OF INTACT AND PARTIALLY BIODEGRADED LINEAR ALKYL BENZENE SULFONATES. D.E. Linder and M.C. Allen

SESSION P – Lecithin II – ProcessingChairmen: **G.R. List and B.F. Szuhaj**2:00 p.m., **Murray Hill B**

- 2:00 INTRODUCTION – G.R. List
- 2:05 98 – COMPOSITION OF SOYBEAN LECITHIN. C.R. Scholfield
- 2:25 99 – DEGUMMING OF SOYBEAN OIL: EFFECT OF OPERATIONAL PARAMETERS ON LECITHIN REMOVAL AND QUALITY. G.R. List, J.M. Avellaneda and T.L. Mounts
- 2:45 100 – CORN LECITHIN. E.J. Weber
- 3:05 101 – INSTANTIZATION OF FOOD WITH LECITHIN IN MIXING PROCESS. K. Strauss
- 3:25 102 – SUNFLOWER LECITHIN. W.H. Morrison III
- 3:45 103 – LECITHIN EXTRACTION, CHARACTERIZATION, AND USE WITH EMPHASIS ON GLANDLESS COTTONSEED AS A COMMERCIAL SOURCE. J.P. Cherry, M.S. Gray and L.A. Jones
- 4:05 104 – COMPARISON OF METHODS FOR THE ANALYSIS OF PHOSPHORUS AND LECITHIN IN RAPESEED OIL. J.K. Daun, L.D. Davidson, J.A. Blake and W. Yeun
- 4:25 105 – OBTAINING OF PHOSPHATIDYLCHOLINE. A. Nasner

SESSION Q – Autoxidation I (Autoxidation Mechanism)Chairmen: **E.N. Frankel, W. Grosch and H.W. Gardner**2:00 p.m., **Gibson A&B**

- 2:00 INTRODUCTION – E.N. Frankel
- 2:05 106 – MEASUREMENT OF OXIDATIONS IN FATS. Enzo Fedeli and Ada Gasharoli
- 2:25 107 – THE MECHANISM OF THE REARRANGEMENT OF PENTADIENYL HYDROPEROXIDES. H.W.S. Chan, J.A. Matthew and D.T. Coxon
- 2:45 108 – EPR FLOW AND SPIN-TRAPPING TECHNIQUES APPLIED TO PROBLEMS IN LIPID OXIDATION. K.M. Schaich and D.C. Borg
- 3:05 109 – ESTIMATION OF THE PROCEEDING OF TISSUE LIPID PEROXIDATIONS BY THE MEASUREMENT OF CHEMILUMINESCENCE. Teruo Miyazawa and Takashi Kaneda

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Monday (continued)

- 3:25 110 – MODEL EXPERIMENTS ABOUT THE FORMATION OF VOLATILE CARBONYL COMPOUNDS. W. Grosch, P. Schieberle and G. Laskawy
- 3:34 111 – FURTHER STUDIES OF A MODEL FOR LIPID HYDROPEROXIDE DEGRADATION: Characterization of New Products and the Nonparticipation of Superoxide Anion in the Formation of Secondary Oxidation Products. H.W. Gardner and P.A. Jursinic
- 4:05 112 – QUANTITATIVE ANALYSES OF HYDROPEROXIDES BY HIGH PRESSURE LIQUID CHROMATOGRAPHY OF AUTOXIDIZED AND PHOTSENSITIZED-OXIDIZED FATTY ESTERS. W.E. Neff and E.N. Frankel
- 4:25 113 – ANALYSIS OF OLEATE, LINOLEATE AND LINOLENATE HYDROPEROXIDES IN OXIDIZED ESTER MIXTURES. Seyed H. Falemi and Earl G. Hammond
- 4:45 114 – THE APPLICATION OF DIELECTRIC PERMEATIVITY MEASUREMENTS TO INVESTIGATION OF THE INITIATION STAGE OF AUTOXIDATION OF OLEYL ALCOHOL. Jozef Sliwiok and Teresa Kowalska

SESSION R – Fatty Acids Industry Looks at 1990**Chairmen: E.C. Leonard and Kenneth E. Holt****2:00 p.m., Rendezvous Room**

- 2:00 INTRODUCTION – E.C. Leonard
- 2:05 115 – RETROSPECTIVE OVERVIEW/A LOOK BACKWARD AT THE 1970s. E.C. Leonard
- 2:25 116 – TALL OIL FATTY ACIDS – 1990. M.J. Kelly
- 2:45 117 – CURRENT AND FUTURE MARKETS FOR FATTY ACIDS IN THE RUBBER INDUSTRY. L.G. Parkinson
- 3:05 118 – METALLIC STEARATES – TODAY THROUGH 1990. T.J. Gibbons
- 3:25 119 – FATTY CHEMICALS FOR SYNTHETIC LUBRICANTS IN THE 1980s. S.E. Gloyer and T.E. Breuer
- 3:45 120 – THE HUMAN FOOD MARKET FOR FATTY ACIDS. R. Stutz, J.M. Hesser, M.J. Kelly, and William T. McNabola
- 4:05 121 – ECONOMIC FORECASTING FOR THE FATTY ACID INDUSTRY. E.C. Leonard
- 4:25 DISCUSSION

Tuesday, April 29**SESSION S – Processing III****Chairmen: Frank Khym and R.R. Allen****10:15 a.m., Sutton Room**

- 10:15 122 – HYDROGENATION, PRACTICES UPDATE. C.T. Zehnder
- 10:35 123 – LABORATORY-SCALE CONTINUOUS HYDROGENATION: EFFECT OF PRESSURE. J.M. Snyder, T.L. Mounts, C.R. Scholfield and H.J. Dutton
- 10:55 124 – HYDROGENATION OF VEGETABLE OILS WITH SULFUR TREATED NICKEL CATALYSTS. R.R. Allen and J.E. Covey
- 11:15 125 – A COMPARISON OF HYDROGENATION SELECTIVITIES BETWEEN TRIGLYCERIDES AND FATTY ACID. R.C. Hastert
- 11:35 126 – INFLUENCE OF REMAINING PHOSPHATIDES DURING HYDROGENATION OF SOYBEAN OIL. I. Ottesen and B.H. Jensen
- 11:55 127 – HYDROGENATION OF METHYL SORBATE AND SOYBEAN ESTERS WITH POLYMER-BOUND METAL CATALYSTS. E.N. Frankel, J.P. Friedrich, T.R. Bessler and N.L. Holy

SESSION T – Nutritional Effects of *trans* Isomers II**Chairmen: Gunhild Hölmer and Fred A. Kummerow****10:15 a.m., Gramercy A**

- 10:15 128 – DESATURATION OF ISOMERIC *TRANS*- AND *CIS*-OCTADECENOIC ACIDS BY RAT LIVER MICROSOMES, AND THE EFFECTS OF THESE ISOMERS UPON $\Delta 5$, $\Delta 6$ AND $\Delta 9$ DESATURASES. M.M. Mahfouz and R.T. Holman
- 10:35 129 – EFFECTS OF HYDROGENATED FATS CONTAINING *TRANS* FATTY ACIDS ON HEART MITOCHONDRIAL OXIDATIVE PHOSPHORYLATION. S. Royce and F.A. Kummerow
- 10:55 130 – β -OXIDATION OF *TRANS*-OCTADECENOIC FATTY ACIDS BY HEART MITOCHONDRIA. L.D. Lawson and R.T. Holman
- 11:15 131 – LIPID COMPOSITION OF SWINE HEART PLASMA MEMBRANE. B. Babka and F.A. Kummerow
- 11:35 132 – THE EFFECT OF *TRANS* FATS ON CALCIUM TRANSPORT IN THE ERYTHROCYTE. D.W. Koerner and F.A. Kummerow

- 11:55 133 – THE EFFECT OF VEGETABLE AND PARTIALLY HYDROGENATED MARINE OILS ON THE MEMBRANE PHOSPHOLIPID COMPOSITION AND MITOCHONDRIAL FUNCTION OF HEART AND LIVER IN THE RAT. R. Blomstrand and L. Svensson

- 12:15 134 – INFLUENCE OF DIETARY *TRANS* FATTY ACID ON ATHEROSCLEROSIS IN RABBITS. D. Kritchevsky, N.A. Little, L.M. Davidson and Herbert Ruttenberg

SESSION U – Aquatic Lipids I**Chairmen: J.D. Joseph and R.G. Ackman****10:15 a.m., Gramercy B**

- 10:15 INTRODUCTION – J.D. Joseph
- 10:20 135 – ARSENIC LIPID BIOSYNTHESIS AND METABOLISM IN MARINE ORGANISMS. A.A. Benson, R.V. Cooney and J.M. Herrera-Lasso
- 10:40 136 – THE PRESENCE AND METABOLISM OF STEROL-5,7-DIENES IN SOME MARINE ORGANISMS. L.J. Goad, A.S. Khan and R.M. Goodfellow
- 11:00 137 – POLYUNSATURATED FATTY ACIDS OF PHYTOPLANKTON GLYCOLIPIDS. D.H. Beach and G.G. Holz, Jr.
- 11:20 138 – SEAWEEDS AS SOURCES OF NOVEL FATTY ACIDS. W.N. Ratnayake, J.S. Grossert and R.G. Ackman
- 11:40 139 – FATTY ACID COMPOSITION OF SYMBIOTIC ZOOXANTHELLAE IN RELATION TO THEIR HOST. D.G. Bishop and J.R. Kenrick
- 12:00 140 – STEROLS OF WILD AND CULTIVATED OYSTERS. C.J. Berenberg and G.W. Patterson

SESSION V – Emulsifiers and Emulsions**Chairmen: A.J. Del Vecchio and H. Bruschweiler****10:15 a.m., Beekman Room**

- 10:15 INTRODUCTION – A.J. Del Vecchio
- 10:20 141 – EMULSIFIERS AS PROTEIN COMPLEXING AGENTS. E.J. Hughes
- 10:40 142 – ANALYSIS AND CLASSIFICATION OF EMULSIFIERS. Hans Bruschweiler

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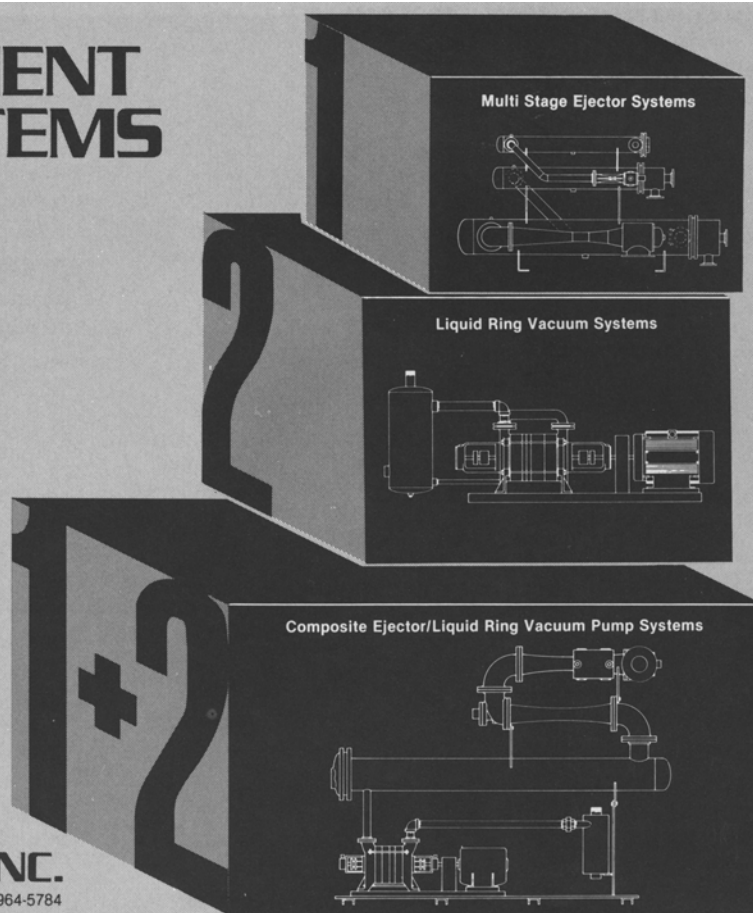
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- 11:00 143 — HPLC ANALYSIS OF NONIONIC EMULSIFIERS. John Sørensen
- 11:20 144 — USE OF POLYGLYCEROL ESTERS IN FOODS. R.T. McIntyre and Karen Hendrix
- 11:40 145 — SURFACE ACTIVE PROPERTIES AND ASSOCIATIVE STRUCTURES OF POLYGLYCEROL ESTERS IN FOOD EMULSIONS. Wil Hemker
- 12:00 146 — MULTIPLE EMULSIONS: SOME ASPECTS OF THEIR DEVELOPMENT AS DRUG DELIVERY SYSTEMS. Sylvan G. Frank

SESSION W — Sterol Analysis I

Chairmen: H.W. Kircher and Erich Heftman

10:15 a.m., Regent Room

- 10:15 INTRODUCTION — H.W. Kircher
- 10:20 144 — TECHNIQUES IN THE ISOLATION AND IDENTIFICATION OF STEROIDS OF INSECTS AND ALGAE. M.J. Thompson, G.W. Patterson, S.R. Dutky, J.A. Svoboda and J.N. Kaplanis
- 10:40 145 — HIGH RESOLUTION GLC ANALYSIS OF STEROID HORMONE METABOLITES WITH CHEMICALLY BONDED STATIONARY PHASE GLASS CAPILLARY COLUMNS. C. Madani and E.M. Chambaz
- 11:00 146 — STEROL ANALYSIS FOR THE DETECTION OF ADULTERATION OF MILK FAT. E. Hornberg and A. Seher
- 11:20 147 — SELECTIVE REACTIONS IN THE ANALYSIS AND CHARACTERIZATION OF STEROIDS BY GC-MS. C.J.W. Brooks, W.J. Cole and H.B. McIntyre
- 11:40 148 — ANALYSIS OF CHOLESTEROL OXIDE AND ITS METABOLITES IN MOUSE TISSUES. H.S. Black
- 12:00 149 — ANALYSIS AND STRUCTURE DETERMINATION OF UNSATURATED BILE ACIDS. A. Kuksis and P. Child

- 12:20 150 — THE DETERMINATION OF STEROIDS WITH AND WITHOUT NATURAL ELECTROPHORES BY GAS CHROMATOGRAPHY AND ELECTRON CAPTURE DETECTION. C.F. Poole, A. Zlatkis and E.D. Morgan

SESSION X — Soaps and Detergents III (Ingredients)

Chairmen: I.R. Schmolka and J.A. Monick

10:15 a.m., Murray Hill A

- 10:15 INTRODUCTION — I.R. Schmolka
- 10:20 151 — ON DERIVATIVES OF OXOALCOHOLS OBTAINED BY HYDROCARBOXYMETHYLATION OF INTERNAL OLEFINS. H.H. Maag
- 10:40 152 — ENERGY CONSUMPTION IN THE COURSE OF MANUFACTURING AND USE OF DETERGENT BUILDERS. H.D. Nielsen and J. Kandler
- 11:00 153 — CHLORINATED SURFACTANTS. R. Perron and J. Petit
- 11:20 154 — NATURAL FATTY ALCOHOLS, THEIR COMEBACK AS DETERGENT RAW MATERIALS: A Review of Production and Processing Technology. M. Ballestra
- 11:40 155 — ENZYMES FOR LOW TEMPERATURE WASHING. M. Hilmer Nielsen
- 12:00 156 — SOAPS AND DETERGENTS AND THE ENVIRONMENT. A. Taylor

SESSION Y — Lecithin III (Use of Dietary Lecithin to Modify Brain Function)

Chairmen: R.J. Wurtman and B.F. Szuhaj

10:15 a.m., Murray Hill B

- 10:15 INTRODUCTION — R.J. Wurtman
- 10:20 157 — INTRODUCTION: USE OF LECITHIN, CHOLINE, AND OTHER NUTRIENTS TO MODIFY BRAIN FUNCTIONS. R.J. Wurtman

Tuesday (continued)

- 10:50 158 – PRECURSOR CONTROL OF ACETYLCHOLINE SYNTHESIS. S.H. Zeisel
- 11:20 159 – METABOLIC FATE OF DIETARY LECITHIN. U.M.T. Houtsmuller
- 11:50 160 – CLINICAL USES AND METABOLIC EFFECTS OF EXOGENOUS LECITHINS. J.H. Growdon

SESSION Z – Packaging

Chairmen: Seymour G. Gilbert and G.C. vom Bruck

10:15 a.m., Gibson A&B

- 10:15 INTRODUCTION – S.G. Gilbert
- 10:20 161 – INTERACTION OF FAT-CONTAINING FOOD WITH PLASTIC PACKAGING. C.G. vom Bruck, K. Figge and F. Rudolph
- 11:05 162 – CATALYSIS OF LIPID OXIDATION BY POLYOLEFIN PACKAGING MATERIALS. S.G. Gilbert, J.A.F. Faria and C. Mannheim
- 11:25 163 – THE EFFECTS OF PROCESSING, PACKAGING AND STORAGE ON THE OXIDATIVE STABILITY OF FOOD SYSTEMS. J.R. Giacini and J.I. Gray
- 11:45 DISCUSSION

SESSION AA – General I

Chairmen: V.K. Babayan and A. Crossley

10:15 a.m., Rendezvous Room

- 10:15 164 – COCOA BUTTER SUBSTITUTES FROM MANGO FAT. B.P. Baliga and A.D. Shitole
- 10:35 165 – QUALITY OF COCOA BUTTER. H.R. Kattenberg
- 10:55 166 – THE EPOXYSTEARIC ACID CONTENT OF SALSEED FAT. T.W. Hammonds and R.V. Harris
- 11:15 167 – A BIBLIOGRAPHY ON THE COMPOSITION, PROCESSING, QUALITY AND USES OF SOYBEAN OIL. J.C. Cowan
- 11:35 167A – TRIGLYCERIDE STRUCTURE OF NAKED SEEDED PUMPKIN SEED OIL. J. Mark Black, T.H. Rhew and Sharon L. Melton
- 11:55 167B – A STUDY OF THE FLAGELLAR LIPIDS OF *CHLAMYDOMONAS REINHARDII*. Paul C. Brown
Honored Student presentation
- 12:15 167C – PASSION FRUIT SEED AS A POTENTIAL OIL SOURCE. C.T. Sun, J.T. Lee and T.Y. Liu

SESSION BB – Processing IV

Chairmen: Frank Middleton and A.J. McCabe

2:00 p.m., Sutton Room

- 2:00 168 – CHARACTERISTICS OF NICKEL/SULFUR CATALYSTS IN THE HYDROGENATION OF SOYBEAN OIL AT *TRANS* ISOMER PRODUCING CONDITIONS. D.V. Okonek, W.R. Alcorn and L.A. Cullo
- 2:20 169 – HALOGEN POISONING OF CU-BASED HYDROGENATION CATALYSTS. J.A. Heldal and P.C. Mørk
- 2:40 170 – MODELING OF REACTION RATE CONSTANTS IN SOYBEAN OIL HYDROGENATION. A.H. Chen, D.D. McIntire and R.R. Allen
- 3:00 171 – PARTIALLY HYDROGENATED-WINTERIZED SOYBEAN OIL. G.R. List
- 3:20 172 – KINETICS, MASS TRANSFER AND SCALE-UP IN NICKEL-CATALYZED OIL HYDROGENATORS. A.S. Susu, A.F. Ogunye and S. Ganeshalingam
- 3:40 173 – OIL REFINERY DIGITAL CONTROL FOR CONTINUOUS CAUSTIC DILUTION. P.F. Elliott
- 4:00 174 – COMPUTER APPLICATIONS TO EXTRACTION & OIL PROCESSING. N. Witte

- 4:20 175 – A COMPARISON OF ELECTROMECHANICAL AND MICROPROCESSOR BASED CONTROLS FOR THE FAT AND OIL INDUSTRY. G.E. Pearce and J. Coon
- 4:40 176 – BY-PRODUCT RECOVERY AND POLLUTION CONTROL BY FERMENTATION PROCESS IN OIL EXTRACTION PLANTS. L. Malm

SESSION CC – Nutritional Effects of *Trans* Isomers III

Chairmen: Fred A. Kummerow and Gunhild Høilmer

2:00 p.m., Gramercy A

- 2:00 177 – INCORPORATION INTO LIPID CLASSES OF PRODUCTS FROM MICROSOMAL DESATURATION OF ISOMERIC *trans*-OCTADECENOIC ACIDS. T. Riisom and R.T. Holman
- 2:20 178 – INFLUENCE OF A MARGARINE CONTAINING DIET ON ARYL HYDROCARBON HYDROXYLASE ACTIVITY. J. Sampugna, J.L. Casterline, M.G. Enig and Mark Keeney
- 2:40 179 – THE INFLUENCE OF PARTIALLY HYDROGENATED MARINE OILS ON LIPID METABOLISM IN LIVER AND HEART OF RATS. Gunhild Høilmer and Carl-Erik Høy
- 3:00 180 – INFLUENCE OF PARTIALLY HYDROGENATED PEANUT OIL ON THE PHOSPHOLIPID COMPOSITION AND THE FUNCTION OF MITOCHONDRIA. Carl-Erik Høy and Gunhild Høilmer
- 3:20 181 – PARTIALLY HYDROGENATED MARINE OIL (PHMO), INFLUENCE ON RAT LIVER METABOLISM. T. Farbu, J. Andresen, R. Rønneberg and Georg Lambertsen
- 3:40 182 – OCCURRENCE OF *trans* FATTY ACIDS IN NEWBORN MICE. L.A. Pallansch, L.M. Tidler, J. Sampugna and Mark Keeney
- 4:00 183 – FATTY ACID COMPOSITION OF SELECTED FOOD ITEMS WITH EMPHASIS ON *trans* OCTADECENOATE. M.G. Enig, L.A. Pallansch, J. Sampugna and Mark Keeney
- 4:20 184 – ANALYSIS OF LONG-CHAIN ISOMERIC FATTY ACIDS WITH HPLC AND GLASS CAPILLARY GAS CHROMATOGRAPHY. L. Svensson and R. Blomstrand

SESSION DD – Aquatic Lipids II

Chairmen: R.G. Ackman and J.D. Joseph

2:00 p.m., Gramercy B

- 2:00 185 – LIPID COMPOSITION AND METABOLISM OF THE PATAGONIAN BIVALVE MOLLUSC *DIPLODOM PATAGONICUS*. R.J. Pollero and R.R. Brenner
- 2:20 186 – NUTRITIONAL ASPECTS OF MARINE LIPIDS IN CRUSTACEANS. A. Kanazawa and S. Teshima
- 2:40 187 – LIPIDS OF NERVOUS TISSUES FROM HORSESHOE CRAB AND HAGFISH. R. Lee and F. Gonsoulin
- 3:00 188 – FATTY ACIDS ESSENTIAL FOR THE REARING OF FISH: INFLUENCE OF DIFFERENT YEASTS, *CHLORELLAS* AND ROTIFERS ON MORTALITY IN RED SEABREAM. T. Watanabe, C. Kitajima, S. Fujita and O. Imada
- 3:20 189 – LIPID ANALYSIS OF A NATURAL SOUTH ATLANTIC FOOD CHAIN. V.J. Moreno and J.E. Moreno de Aizpun
- 3:40 190 – RELIABILITY OF FATTY ACID VALUES PURPORTING TO REPRESENT COMPOSITION OF OIL FROM DIFFERENT SPECIES OF FISH. M.E. Stansby
- 4:00 191 – LIPID CHANGES DURING EMBRYONIC DEVELOPMENT OF LAKE WHITEFISH, *COREGONUS CLUPEIFORMIS* (MITCHILL). M. Yurkowski, W.G. Franzin, H.R. Boese and J.L. Tabachek
- 4:20 192 – UTILIZATION OF MARINE OILS IN CHILE. Lilia Masson and M.A. Mella

Continued on page 94A.

Tuesday (continued)**SESSION EE – Lipids in Baking**

Chairmen: J.G. Ponte, Jr., and Kare Larsson

2:00 p.m., Beekman Room

- 2:00 INTRODUCTION – J.G. Ponte, Jr.
- 2:05 193 – WHEAT FLOUR LIPIDS, SHORTENING, AND SURFACTANTS IN BREADMAKING: SYNERGISM AND/OR ANTAGONISM. O.K. Chung and Y. Pomeranz
- 2:25 194 – TRENDS IN THE USAGE OF SHORTENING IN BREADS AND ROLLS. S.S. Jackel.
- 2:45 195 – SHELF-LIFE STUDIES OF HYDROGENATED VEGETABLE SHORTENINGS IN BAKED GOODS FOR MILITARY RATIONS. N.E. Harris, N.J. Kefley, B.L. Bell, D.E. Sherman, L. Cox and D.E. Wescott
- 3:05 196 – EVOLUTION OF SHORTENINGS IN BREAD. W.M. Smith
- 3:25 197 – FUNCTIONS AND REQUIREMENTS OF FATS AND EMULSIFIERS IN PREPARED CAKE MIXES. K.A. Painter
- 3:45 198 – AN "IDEAL" SURFACTANT IN BREADMAKING. Y. Pomeranz
- 34:05 199 – FATS AND OILS AND THEIR ROLE AS FUNCTIONAL INGREDIENTS IN THE BAKING INDUSTRY. F. Eber
- 4:25 200 – POLYSILOXANE FLUIDS IN BAKING FATS – EFFECTS ON BAKING PRODUCT CHARACTERISTICS. K. Lorenz

SESSION FF – High Performance Liquid**Chromatography III**

Chairmen: Kurt Aitzetmüller and Chi-Tang Ho

2:00 p.m., Regent Room

- 2:00 201 – HPLC OF PHOSPHOLIPIDS AND GLYCOLIPIDS. Firoze B. Jungalwala
- 2:20 202 – SEPARATION OF MOLECULAR SPECIES OF CERAMIDES AS BENZOYL AND *p*-NITROBENZOYL DERIVATIVES BY HIGH PERFORMANCE LIQUID CHROMATOGRAPHY. U.H. Do, P.T. Pei, S.L. McKinley and S. Ramachandran.
- 2:40 203 – PURIFICATION OF NATURAL AND SYNTHETIC PHOSPHOLIPIDS USING RADIALLY COMPRESSED SILICA COLUMNS. K.M. Patel and J.T. Sparrow
- 3:00 204 – DETERMINATION OF VITAMIN A, E, K AND UBIQUINONE. K. Abe, O. Hiroshima, S. Ikenoya, M. Ohmae and K. Kawabe
- 3:20 205 – SEPARATION OF PRENYLQUINONES AND OTHER PRENYLLIPIDS BY ABSORPTION AND REVERSED-PHASE HPLC. H.K. Lichtenthaler and U. Prenzel
- 3:40 206 – HPLC DETERMINATION OF GLYCOLIPIDS IN HARD RED WINTER WHEATS AND FLOURS THAT VARY IN BREADMAKING POTENTIAL. O.K. Chung, T.N. Tweeten, D.L. Wetzal, and B.G. Howard
- 4:00 207 – EFFECTS OF COLUMN PACKINGS AND SOLVENT SYSTEMS ON THE SEPARATIONS OF GLYCOLIPIDS BY HIGH PERFORMANCE LIQUID CHROMATOGRAPHY. T.N. Tweeten, D.L. Wetzal and O.K. Chung
- 4:20 208 – THE ANALYSIS OF DETERGENTS BY HIGH PERFORMANCE LIQUID CHROMATOGRAPHY. I. Chappell

SESSION GG – Soaps and Detergents IV (Cosmetics)

Chairmen: J.A. Monick and F.R.M. McDonnell

2:00 p.m., Murray Hill A

- 2:00 INTRODUCTION
- 2:05 209 – A UNIQUE NEW COSMETIC FLUID EMULSION. Herman Brown

- 2:25 210 – JOJOBA OIL AS COSMETIC BASE. Thomas K. Miwa
- 2:45 211 – THE USE OF SODIUM BOROHYDRIDE IN PURIFICATION OF LANOLIN, TALLOW, AND OTHER RELATED DERIVATIVES. Michael M. Cook
- 3:05 212 – NEWER PROPOXYLATED DERIVATIVES AS RAW MATERIALS FOR COSMETICS. G. Barker and M. Barabash
- 3:25 213 – CONTROLLING N-NITROSO COMPOUNDS IN COSMETICS. William J. Mergens
- 3:45 214 – ALPHA OLEFIN SULFONATES – COSMETIC INGREDIENT FOR THE 80S. A.M. Wendell
- 4:05 214A – USE OF SILICONES IN COSMETICS AND TOILETRIES. Samuel R. Wendel

SESSION HH – Lecithin IV (Nonfood Applications and Properties)

Chairmen: W. van Nieuwenhuyzen and I. Wilton

2:00 p.m., Murray Hill B

- 2:00 INTRODUCTION – W. van Nieuwenhuyzen
- 2:05 215 – THE INFLUENCE OF OIL CARRIER LECITHINS ON METAL OXIDES AND THEIR DISPERSIONS. Max Kronstein
- 2:25 216 – LECITHIN IN MODERN COSMETICS. G.S. Kass
- 2:45 217 – THE USE OF LECITHIN IN CALF MILK REPLACERS. A.B.M. Cloosterman
- 3:05 218 – CONTROL OF POSTHARVEST GLYCOALKALOID AND CHLOROPHYLL FORMATION IN POTATO TUBERS BY TREATMENTS WITH LECITHIN, OILS, AND HYDROCARBON COMPOUNDS. K.B. Adams and D.K. Salunkhe
- 3:25 INTRODUCTION – I. Wilton
- 3:30 219 – THE FUNCTION OF PHOSPHOLIPIDS OF SOYBEAN LECITHIN IN EMULSIONS. L. Rydhag and I. Wilton
- 3:50 220 – SOME PHYSICO-CHEMICAL PROPERTIES OF SOYBEAN LECITHINS IN RELATIONSHIP TO THE PHOSPHOLIPID COMPOSITION. I. Wilton
- 4:10 221 – THE SURFACE CHEMISTRY OF LECITHIN: EFFECT OF UNSATURATION ON MOLECULAR INTERACTIONS. D.O. Shah

SESSION II – Autoxidation II (Biological Oxidation)

Chairmen: E.N. Frankel, P. McCay and P.J. O'Brien

2:00 p.m., Gibson A&B

- 2:00 222 – BIOCHEMICAL EFFECTS OF 4-HYDROXYALKENALS IN PARTICULAR 4-HYDROXYNONENAL PRODUCED BY MICROBIAL LIPOPEROXIDATION. Hermann Esterbauer, Mario Comporti and Angelo Benedetti
- 2:20 223 – LEVELS OF OXYGENATED FATTY ACIDS IN YOUNG PLANT SEEDLINGS. Brady A. Vick and Don C. Zimmerman
- 2:40 224 – RELATIONSHIP BETWEEN LIPOPEROXIDE AND GERIATRIC DISEASES. Kazuo Fukuzumi
- 3:00 225 – RATES AND PRODUCTS IN AUTOXIDATION OF PHOSPHATIDYLCHOLINE LIPOSOMES. Guey-Shuang Wu, Robert A. Stein and James F. Mead
- 3:20 226 – FORMATION OF 13-L-HYDROPEROXIDE FROM LINOLENIC ACID IN TEA CHLOROPLASTS. Akikazu Hatanaka, Tadahiko Kajiwara and Jiro Sekiya
- 3:40 227 – ESTIMATION OF VITAMIN E RELATED FLUORESCENT COMPOUNDS IN TISSUES. A. Saari Csallany and John D. Manwaring
- 4:00 228 – THE ROLE OF GLUTATHIONE PEROXIDASE IN P-450-MEDIATED DRUG-INDUCED LIPOPEROXIDATION. Albrecht Wendel and Sylvia Feuerstein

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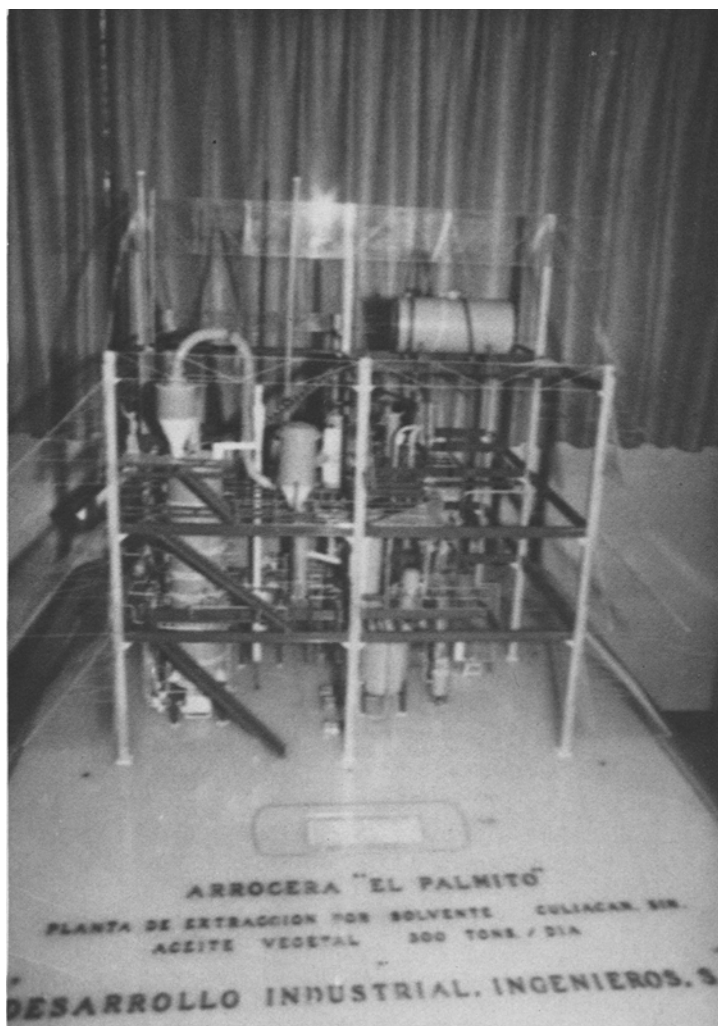
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4:20 229 – THE EFFECT OF LIPOXIDASE INACTIVATION ON THE QUALITY OF EXTRACTED SOYBEAN OIL AND MEAL. R.D. Rice, L.S. Wei, M.P. Steinberg and A.I. Nelson

SESSION JJ – Carotenoids

Chairmen: P.S. Manchand and T.W. Goodwin

2:00 p.m., Rendezvous Room

- 2:00 INTRODUCTION – P.S. Manchand
- 2:05 231 – APPROACHES TO THE SYNTHESIS OF CANTHAXANTHIN. M. Rosenberger, P. McDougal, G. Saucy and J. Bahr
- 2:25 232 – CAROTENOIDS OF THE CAPE ROCK LOBSTER AND THEIR UTILIZATION. A.A. Spark, Susan Peall, K. Damstra, S. Rudd and A. Templar

- 2:45 233 – WATER DISPERSIBLE CAROTENOID PRODUCTS. N. Ben-Eliezer
- 3:05 234 – NEW APPLICATIONS OF CAROTENOIDS IN FAT BASED SYSTEMS. A.A. Metzner
- 3:25 235 – CAROTENOIDS OF THE SPONGE *MICROCIONA PROLIFERA*: IMPLICATIONS FOR THE MARINE FOOD WEB. C. Litchfield and S. Liaaen-Jensen
- 3:45 236 – THE OIL DROPLET CAROTENOIDS OF THE EYES OF BIRDS AND REPTILES. B.H. Davies, S. Pollard R.J. deB. Apps
- 4:05 237 – A NEW APPROACH TO THE SYNTHESIS OF OPTICALLY ACTIVE ZEAXANTHIN AND ALLOXANTHIN. G. Weber and G. Saucy
- 4:25 238 – CAROTENOID-PROTEIN COMPLEXES. G. Britton

Wednesday, April 30

SESSION KK – Energy Conservation

Chairmen: K.W. Becker and Gunnar Haraldson

10:15 a.m., Sutton Room

- 10:15 INTRODUCTION – K.W. Becker
- 10:20 239 – SOLAR AUGMENTED SOYBEAN DRYING. B.R. Hall
- 10:40 240 – EFFECTIVE ENERGY MANAGEMENT. D. Harrelson and D. Antonellis
- 11:00 241 – UTILITY SERVICES COSTS. R. Altemus

- 11:20 242 – CORPORATE ENERGY CONSERVATION AND COMPLIANCE PROGRAM: A CASE STUDY. T.C. O'Connor
- 11:40 243 – PROCESS CONSIDERATIONS – ENERGY CONSERVATION IN SOLVENT EXTRACTION. K.W. Becker
- 12:00 244 – CONSIDERATIONS ON ENERGY SAVING IN VEGETABLE OIL REFINING. A. Athanassiadis
- 12:20 245 – SIMPLIFIED MISCELLA REFINERY FOR ENERGY SAVING IN COTTONSEED OIL. A. Garcia-Serrato

Wednesday (continued)

STUDY. J.H. Mellema, B.L. Madison and R.G. Manning

SESSION LL – Relationship of Lipids to the Aging Process I

Chairmen: Hans Kaunitz and Audrey Faulkner

10:15 a.m., Gramercy A

- 10:15 INTRODUCTION – Hans Kaunitz
- 10:20 246 – CELLULAR AGING. Donald W. King and Gerda Nette
- 10:40 247 – HISTOLOGICAL FINDINGS RELATED TO LIPID DEPOSITION IN AGING TISSUES. A. Whitley Branwood
- 11:00 248 – AGING AND ARTERIOSCLEROSIS. Hans Kaunitz
- 11:20 249 – RELATIONS BETWEEN NUTRITION, SERUM LIPIDS, AGING, AND ARTERIOSCLEROSIS. E. Renner
- 11:40 250 – CORRELATION OF DIETARY CHOLESTEROL WITH PLASMA TRIGLYCERIDES IN WOMEN. G.B. Slater and R.B. Alfin-Slater
- 12:00 251 – IN VIVO LIPIDPEROXYDATION AND ORGANIC FREE RADICAL CONTENT OF RAT ADRENALS. EFFECTS OF ESSENTIAL FATTY ACIDS-, VITAMIN E-, AND SELENIUM DEFICIENCY. E.J. Christ
- 12:20 252 – CONSEQUENCES OF NUTRITION AND LIPID PEROXIDATION TO THE AGING PROCESS. Jon J. Kabara

SESSION MM – Rapeseed Oil and Protein I

Chairmen: Paul Sims and Lars Appelqvist

10:15 a.m., Gramercy B

- 10:15 INTRODUCTION – Paul A. Sims
- 10:20 253 – EDIBLE OIL PRODUCTS FROM LOW-ERUCIC-ACID RAPESEED OIL. B.F. Teasdale
- 10:40 254 – EFFECTS OF OIL EXTRACTION TECHNOLOGY ON RAPESEED MEAL QUALITY. E.H. Unger, S.J. Campbell and D.I. McGregor
- 11:00 255 – DEVELOPMENT OF A DEHULLING PROCESS TO IMPROVE THE CAKE QUALITY. J.J. Baudet
- 11:20 256 – REVIEW OF RAPESEED MEAL IN ANIMAL NUTRITION. PART 1. RUMINANT ANIMALS. Sigvard Thomke
- 11:40 257 – RAPESEED MEAL IN ANIMAL NUTRITION. II-NON-RUMINANT ANIMALS. D.R. Clandinin
- 12:00 258 – CHARACTERISTICS OF MYROSINASE IN POLISH VARIETIES OF RAPESEED. Halina Nowak Kozłowska

SESSION NN – Physical Aspects of Lipids I

Chairmen: M. Naudet and F.E. Luddy

10:15 a.m., Beekman Room

- 10:15 INTRODUCTION – M. Naudet
- 10:20 259 – POLYMORPHISM OF GLYCERIDES. R.O. Feuge
- 10:40 260 – FRACTIONATION OF BUTTER BY CRYSTALLIZATION WITHOUT SOLVENT. COMPLETE DETERMINATION OF GLYCERIDE STRUCTURE OF EACH FRACTION. J.-P. Wathélet, C. Deroanne and M. Severin
- 11:00 261 – SOLVENT PARTITIONING OF FATS: 1. BUTTER FAT. S. Longhi and F.E. Luddy
- 11:20 262 – PREDICTION OF THE THERMAL BEHAVIOR OF FATS. R. Perron
- 11:40 263 – THERMAL BEHAVIOR OF TRIGLYCERIDES. R. Perron
- 12:00 264 – THE RELATIONSHIP BETWEEN SOLIDS CONTENT, AS DETERMINED BY NMR DILATION AND SOLID FAT INDEX. Th. J.H. Guertz and D. Waddington
- 12:20 265 – PULSED NMR METHOD FOR DETERMINING SOLID FAT CONTENT: COLLABORATIVE

SESSION OO – Sterol Analysis II

Chairmen: Erich Heftman and H.W. Kircher

10:15 a.m., Regent Room

- 10:15 265 – IDENTIFICATION OF STEROIDS BY CHEMICAL IONIZATION MASS SPECTROMETRY. Y.Y. Lin
- 10:35 266 – STEROL ANALYSES ON CITRUS, LEAF PROTEIN CONCENTRATES AND MYCORRHIZAL FUNGI. H.E. Nordby
- 10:55 267 – CONFORMATIONAL ANALYSIS OF STEROIDS: COMPARISON OF X-RAY CRYSTALLOGRAPHIC OBSERVATIONS WITH DATA FROM OTHER SOURCES. W.L. Duax
- 11:15 268 – CHOLESTEROL METHODOLOGY FOR HUMAN STUDIES. B. Zak
- 11:35 269 – THE ANALYSIS OF URINARY STEROIDS. P. Vestergaard
- 11:55 270 – DETERMINATION OF MOLECULAR FORMULA AND STEREO-CONFIGURATION BY X-RAY DIFFRACTION ANALYSIS. J. Karle
- 12:15 271 – IDENTIFICATION OF STEROLS AND BILE ACIDS BY COMPUTERIZED GAS CHROMATOGRAPHY-MASS SPECTROMETRY. W.H. Elliott

SESSION PP – Soaps and Detergents V (General)

Chairmen: F.R.M. McDonnell and James Trowbridge

10:15 a.m., Murray Hill A

- 10:15 INTRODUCTION – F.R.M. McDonnell
- 11:00 274 – A STUDY ON THE IMPROVEMENT IN THE FOAM CHARACTERISTICS OF SOAP FOAMS BY THE ADDITION OF SUPER FATTY AGENTS. H. Yamada, H. Komatsu and Muneo Tanaka
- 11:20 275 – PREPARATION OF SURFACTANTS BY REACTION OF FATTY ACID ESTERS WITH HYDROLYZED PROTEINS. O.J. Muscio, Jr., B. Cole, T. McCarty and Vikas Sandu
- 11:40 276 – ACTION OF SURFACTANTS FOR IMPROVING THE SURFACE OF PIGMENTS. Andor Lorinc

SESSION QQ – General II

Chairmen: Lars H. Wiedermann and Thor Grimsvang

10:15 a.m., Murray Hill B

- 10:15 277 – A NEW ENERGY-SAVING PROCESS FOR THE PRODUCTION OF CRUDE OIL WITH EXTREMELY LOW ANISIDIN- AND PEROXIDE-NUMBERS. T. Homann, M. Knuth and Wolfgang Stein
- 10:35 278 – ENERGY SAVINGS IN EDIBLE OIL PROCESSING BY MEANS OF HEAT EXCHANGERS. Gunnar Haraldsson
- 10:55 279 – STEAM JET PUMPS AS VACUUM PUMPS IN THE EDIBLE OIL INDUSTRY. H. Gehring
- 11:15 280 – UTILIZATION OF ZEARALENONE-CONTAMINATED CORN FOR ETHANOL PRODUCTION. G.A. Bennett, A.A. Lagoda, O.L. Shotwell and C.W. Hesselstine
- 11:35 281 – AN IMPROVED METHOD FOR THE PURIFICATION OF GOSSYPOL ACETIC ACID. S.I. Zhou, D.H. Liu, and L.Y. Zhong
- 11:55 282 – LIGHT INDUCED INTERACTIONS OF CARBOXYLIC ACIDS WITH POLYCYCLIC AROMATIC HYDROCARBONS. M.K. Logani, W.A. Austin and R.E. Davies

Continued on page 97A.

Wednesday (continued)**SESSION RR – Aquatic Lipids III**

Chairmen: J.D. Joseph and R.G. Ackman

10:15 a.m., Gibson A&B

- 10:15 283 – THE EFFECT OF FREEZER STORAGE ON THE AUTOXIDATION OF FISH LIPID FRACTIONS. L. Stodolnik
- 10:35 284 – LIPID COMPOSITION OF STOMACH OILS AND SUBCUTANEOUS FAT OF MUTTON BIRDS (*PUFFINUS TENUIOSTRUS*; ORDER PROCELLARIIFORMES). D.G. Bishop, J.R. Kenrick, J. Olley, G.W. Hosie and D.A. Ritz
- 10:55 285 – N-6 FATTY ACIDS IN WILD AND CAPTIVE DOLPHINS. G. Williams, M.A. Crawford and D.C. Malins
- 11:15 286 – A BRIEF EVALUATION OF THE SAFETY OF PARTIALLY HYDROGENATED MARINE OILS (PHMO) IN THE HUMAN DIET. 1. CARDIAC LIPIDOSIS PHENOMENON IN EXPERIMENTAL ANIMALS. S.M. Barlow and I.F. Duthie
- 11:35 287 – A BRIEF EVALUATION OF THE SAFETY OF PARTIALLY HYDROGENATED MARINE OILS (PHMO) IN HUMAN DIET WITH REGARD TO: 2. THE LONGER TERM CARDIAC LESION PHENOMENON IN EXPERIMENTAL ANIMALS. I.F. Duthie and S.W. Barlow
- 11:55 288 – APPLICATIONS OF THE MINI-COMPUTER IN MARINE FATTY ACID ANALYSIS. J.D. Joseph

SESSION SS – Chemical Aspects of Lipids I

Chairmen: Gerhard Maerker and F.D. Gunstone

10:15 a.m., Rendezvous Room

- 10:15 INTRODUCTION – Gerhard Maerker
- 10:20 289 – STEREOSELECTIVE CONTROL OF THE WITIG REACTION: PREPARATION OF METHYL *cis*, *cis*-, *cis*, *trans*-, *trans*, *cis*- AND *trans*, *trans*-12,15-OCTADECADIENOATE-9,10-d₂. H. Rakoff and E.A. Emken
- 10:40 290 – SYNTHESIS OF α -METHYLENE SUBSTITUTED FATTY ACIDS. S. Serota and W.M. Linfield
- 11:00 291 – IMPROVED SYNTHESIS OF THE BIOLOGICALLY ACTIVE SULFOLIPID, SULFATIDYL-DEHYDROEPIANDROSTERONE, AND RELATED COMPOUNDS. M.A. Abou-Gharbia, L. Pashko, A.G. Schwartz and D. Swern
- 11:20 292 – CHEMICAL AND BIOLOGICAL PROPERTIES OF UNUSUAL PHOSPHOLIPIDS. W.J. Baumann, S. Parthasarathy, Y. Wedmid and R. Murari
- 11:40 293 – A NEW SYNTHESIS OF 22-DEHYDROCHOLESTEROL. H.W. Kircher and F.U. Rosenstein
- 12:00 294 – *Trans-cis* ISOMERIZATION OF UNSATURATED FATTY ACIDS. M.S.F. Lie Ken Jie

SESSION TT – Environmental Concerns I

Chairmen: Frank B. White and Ingemar Folkesson

2:00 p.m., Sutton Room

- 2:00 INTRODUCTION – Frank B. White
- 2:05 295 – ENVIRONMENTAL CONCERNS IN INDUSTRY. J.J. Bolger
- 2:25 296 – RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) IMPACTS ON INDUSTRY. M.J. Boyer
- 2:45 297 – THE COMPLETELY CLOSED WATER USAGE SYSTEM IN A DETERGENT PLANT. T. Kinoshita and M. Tanigaki
- 3:05 298 – TREATMENT OF TALL OIL EFFLUENT WITH INDUCED AIR FLOTATION FOLLOWED BY BIOLOGICAL OXIDATION. J.P. Krumbain
- 3:25 299 – ENVIRONMENTAL PROTECTION IN PHYSICAL REFINING OF OILS AND FATTY ACID DISTILLATION. H. Stage

- 3:45 300 – PROCESS FOR RECOVERING MARKETABLE PRODUCTS FROM WASTE WATER SLUDGES. C. Greenfield
- 4:05 301 – EVALUATION OF CULTURED BACTERIA AS A BIOMASS FOR ACTIVATED SLUDGE TREATMENT OF WASTES FROM AN EDIBLE OIL REFINERY. T.J. Walsh, A. Panno and J. Keigher
- 4:25 302 – WASTEWATER TREATMENT FOR EDIBLE OIL REFINERIES. W.C. Seng
- 4:45 303 – ELECTRO-COAGULATION FOR REMOVAL AND RECOVERY OF POLLUTANTS FROM MEAT PACKING HOUSE LIQUID EFFLUENT. O.A. Clemens

SESSION UU – Relationship of Lipids to the Aging Process II

Chairmen: E.J. Christ and Hans Kaunitz

2:00 p.m., Gramercy A

- 2:00 304 – AGE DEPENDENT FORMATION OF OXYGEN RADICALS, LIPID PEROXIDATION AND CHANGES IN BIOLOGICAL MEMBRANE FUNCTION. D. Hegner and H. Nohl
- 2:20 305 – BIOSYNTHESIS OF CHOLESTEROL FROM OLEIC, LINOLEIC AND ARACHIDONIC ACIDS IN BRAIN AND LIVER OF DEVELOPING RATS. Jeanine Raulin
- 2:40 306 – THE MECHANISM AND CONSEQUENCES OF LIPID PEROXIDATION IN ISOLATED HEPATOCYTES AND IN VIVO. J. Hogberg, I. Anundi and Jovan Rajis
- 3:00 307 – EFFECT OF FREE FATTY ACIDS ON SUBENDOCARDIAL PURKINJE FIBERS IN THE CANINE HEART. John J. Fenoglio
- 3:20 308 – MODULATION OF MEMBRANE PROTEINS BY LIPID FLUIDITY AND AGING. Meir Shinitzky
- 3:40 309 – FUNGAL PHOSPHOLIPIDS DURING AGING AND GROWTH WITH α -TOCOPHEROL. S. Ramsammy and R. Cecil Jack
- 4:00 310 – RELATIONSHIP BETWEEN LIPOPEROXIDE AND AGING. Kazuo Fukuzumi
- 4:20 311 – LIPOFUSCIN PIGMENT AND LYSOSOMAL ENZYMES IN AGING RAT LIVER CELLS. D.L. Knook, C.F.A. van Bezooijen and E.Ch. Sleyster
- 4:40 311A – THE MESENCHYMAL HYPOTHESIS OF THE PATHOGENESIS AND ATHEROSCLEROSIS. W.H. Hauss

SESSION VV – Antioxidant

Chairmen: Glen A. Jacobsen and Oliver A.L. Hsieh

2:00 p.m., Gramercy B

- 2:00 INTRODUCTION – G.A. Jacobson
- 2:05 312 – PRODUCTION AND USE OF NATURAL ANTIOXIDANTS. U. Bracco, J. Loliger and J.L. Viret
- 2:25 313 – NATURAL ANTIOXIDANTS ISOLATED FROM CLOVE. Roslyn E. Kramer
- 2:45 314 – POLY AOTM-79 – A NEW ANTIOXIDANT FOR USE IN FOOD. Ned M. Weinshenker, Steven Goldby and Thomas M. Parkinson
- 3:05 315 – ON A CATALYTICAL INFLUENCE OF THE SELECTED AMINO-ANTIOXIDANTS AT THE PROPAGATION STATE OF AUTOXIDATION OF OLEYL ALCOHOL. Teresa Kowalska
- 3:25 316 – ANTIOXIDANTS AS MULTI-FUNCTIONAL PRESERVATIVES IN FOOD AND COSMETICS. Jon J. Kabara
- 3:45 317 – CATALYTIC ACTION OF SOME INORGANIC FOOD ADDITIVES ON THE OXIDATION OF 2,6-DI-TERT-BUTYL-4-METHYLPHENOL (BHT). Beatrice Leventhal, Henryk Daun and Seymour G. Gilbert
- 4:05 318 – BASE SYNERGISM OF THE ANTIOXIDANT ACTIVITY OF CATECHOLAMINES. P.A.T. Swoboda, G.R. Fenwick and L.J. Parr

Continued on page 100A.

Wednesday (continued)

- 4:25 319 – APPLICATIONS OF ANTIOXIDATIVE MAILLARD REACTION PRODUCTS IN FOODS. Hans Lingnert
- 4:45 319A – BEHAVIOR OF ETHOXYQUIN ANTIOXIDANT IN FISH MEAL. A.A. Spark

SESSION WW – Physical Aspects of Lipids II

Chairmen: Francis E. Luddy and M. Naudet

2:00 p.m., Beekman Room

- 2:00 320 – THERMAL BEHAVIOR OF ORDERED AND DISORDERED CRYSTALS FROM FATTY ACIDS, ESTERS, AND ALKANES. Chu-Pei Chang
- 2:20 321 – THE ELECTRON MICROSCOPE LOOKS AT LIPIDS. Susan Jones
- 2:40 322 – ELECTRON MICROSCOPY OF SOYBEAN LIPID BODIES. Craig W. Bair and Harry E. Snyder
- 3:00 323 – CRYSTALLIZATION PROPERTIES OF HYDROGENATED CANOLA OIL. D.K. Loewen
- 3:20 324 – EFFECT OF PHYSICAL PROPERTIES OF PLASTIC FATS ON THERMAL STABILITY AND MECHANICAL PROPERTIES OF FAT PROTEIN GEL PRODUCTS. C.M. Lee and J.W. Hampson
- 3:40 325 – EFFECT OF FREE FAT ON RECONSTITUTABILITY OF DEHYDRATED DAIRY PRODUCTS. V.H. Holsinger
- 4:00 326 – POSITIONAL DISTRIBUTION OF THE FATTY ACIDS WITHIN THE TRIGLYCERIDES OF MANGO (*MANGIFERA INDICA*) KERNAL FAT. W. Van Pee, L. Boni, M. Foma, M. Hoylaert, and A. Hendrikx
- 4:20 327 – UTILIZATION OF SAL FAT AND MOWRAH FAT FOR THE PREPARATION OF PLASTIC FAT PRODUCTS BY INTERESTERIFICATION REACTIONS. D.K. Bhattacharyya, R.S. Vaidyanathan, M.M. Ohakrabarty, and K. Kar

SESSION XX – Nutrition I

Chairmen: R.B. Alfin-Slater and E. Aaes-Jørgensen

2:00 p.m., Regent Room

- 2:00 328 – FATTY ACID VARIABILITY OF PLASMA CHOLESTERYL ESTERS IN ADULT TWINS. V. Warty, F. Harmath, K.W. Kang, J.A. Norton, Jr., and Joe C. Christian
- 2:20 329 – ORGAN PIPE CACTUS STEROL DIOLS AS HYPOCHOLESTEROLEMIC AGENTS. H.W. Kircher, C. McNulty and Andrew A. Kandutsch
- 2:40 330 – EFFECTS OF PROBUCOL ON CHOLESTEROL METABOLISM IN THE RAT. J.R. Li, R.J. Holets and Bruce A. Kottke
- 3:00 331 – THE EFFECT OF DIFFERENT DIETARY FATS ON CHICK PERFORMANCE AND ENERGY UTILIZATION. R. De Schrijver
- 3:20 332 – LIPOPROTEIN PATTERNS IN TWO STRAINS OF MALE ICR MICE DEVELOPED BY SELECTION FOR HIGH AND LOW TOTAL SERUM CHOLESTEROL CONCENTRATIONS. L.F. Ferreri, E.A. Dunnington and J.M. White
- 4:00 334 – POLYUNSATURATED OILS AND PYRUVATE DEHYDROGENASE ACTIVATION. C. Lorette, M. Launay and Jeanine Raulin
- 4:20 335 – INCORPORATION OF AN ESSENTIAL FATTY ACID (LINOLEIC) OF A *trans* FATTY ACID (ELAIDIC) AND THEIR METABOLITES INTO PHOSPHOLIPIDS OF CULTURED HUMAN FIBROBLASTS. R.E. Pitas, T.L. Innerarity and R.W. Mahley
- 4:40 336 – α -LINOLENIC AND LINOLEIC ACIDS AND THE IMMUNE RESPONSE IN THE LEWIS RAT. L.A. Marshall and P.V. Johnston

SESSION YY – New Sources of Fats and Oils I

Chairmen: Everett H. Pryde and H.K. Mangold

2:00 p.m., Murray Hill A

- 2:00 INTRODUCTION – E.H. Pryde
- 2:05 337 – WORLD FATS AND OILS SITUATION. E.H. Pryde and H.O. Doty
- 2:25 338 – MORPHINE-FREE POPPY AS A NEW SOURCE OF EDIBLE OIL. O. Levin and U. Nyman
- 2:45 339 – YEASTS AND MOLDS AS SOURCES OF OILS AND FATS. C. Ratledge
- 3:05 340 – OIL-RICH FOREST OILSEEDS. S.M. Osman and F. Ahmad
- 3:25 341 – POTENTIAL NEW SOURCES OF OIL FROM TROPICAL AMERICA. R.E. Schultes
- 3:45 342 – THE JESSENIA PALM. M.J. Balick
- 4:05 343 – FATS AND OILS – A REGULATORY AND NUTRITIONAL UPDATE. V. Frattali
- 4:25 344 – ALGAE AS SOURCES FOR EDIBLE LIPIDS. R.G. Ackman
- 4:45 345 – OKRA. F.W. Martin and L. Telek

SESSION ZZ – NMR and Mass Spectrometry

Chairmen: G.T. Spencer and J.G. Geurtz

2:00 p.m., Gibson A&B

- 2:00 INTRODUCTION – G.T. Spencer
- 2:05 346 – ¹³C NUCLEAR MAGNETIC RESONANCE SPECTROSCOPY OF OILS CONTAINING CONJUGATED TRIENOIC ACIDS. A.P. Tulloch and L. Bergter
- 2:25 347 – ¹³C NUCLEAR MAGNETIC RESONANCE SPECTROSCOPY OF THE FOUR METHYL 12, 15-OCTADECADIENOATE GEOMETRIC ISOMERS. H. Rakoff, D. Weisleder and E.A. Emken
- 2:45 348 – ¹³CMR OF EPOXY FATTY ACIDS. D. Weisleder
- 3:05 349 – NUCLEAR MAGNETIC RESONANCE STUDIES ON THE MYCOLIC ACIDS. D.E. Minnikin and S.M. Minnikin
- 3:25 350 – ¹⁹F NMR OF FLUORINE LABELED FATTY ACIDS AND PHOSPHOLIPIDS IN LIPID BILAYER VESICLES. J.R. Cavanaugh, P.E. Pfeffer and K.M. Valentine
- 3:45 351 – STUDIES OF CHLOROPHYLL *a* IN MODEL AND NATURAL MEMBRANE SYSTEMS. K.E. Eigenberg, W.R. Croasmun and S.I. Chan
- 4:05 352 – NMR AND MASS SPECTROMETRY OF ANACARDIC ACID DERIVATIVES. G.F. Spencer
- 4:25 353 – FIELD DESORPTION MASS SPECTROMETRY AS A TOOL FOR THE STRUCTURE DETERMINATION OF LIPIDS AND RELATED COMPOUNDS. C.E. Costello
- 4:45 354 – ¹H AND ¹³CMR SPECTRAL STUDIES OF FURANOID FATTY ACIDS. M.S.F. Lie Ken Jie

SESSION AAA – Autoxidation III (Lipoxygenase)

Chairmen: W. Grosch and H.W. Gardner

2:00 p.m., Gibson A&B

- 2:00 355 – EVIDENCE FOR THE FORMATION OF A SPECIFIC α -TOCOPHEROL-LIPOXYGENASE COMPLEX. Shlomo Grossman, Eugenia G. Waksman and Ira S. Hammerman
- 2:20 356 – SOME PROPERTIES OF THE TYPE-2 LIPOXYGENASE FROM SOYBEANS. W. Grosch, P. Schieberle and R. Kieffer
- 2:40 357 – LIPID OXIDATION AND FLAVOR BIOGENESIS IN EDIBLE PLANTS. Terry Galliard
- 3:00 358 – INTERACTIONS BETWEEN PLANT LIPOXYGENASE SYSTEMS AND ESSENTIAL FATTY ACIDS. E.V. Boudnitskaya and I.G. Borisova
- 3:20 359 – PURIFICATION AND SOME PROPERTIES OF WHEAT GERM LIPOXYGENASE. Jacques Nicolas, Maria Autran and Rober Drapron
- 3:40 360 – LIPOXYGENASE INHIBITION BY NATURALLY OCCURRING FATTY ACIDS. Allen J. St. Angelo and Robert L. Ory

- 4:00 361 – NEW ASPECTS OF THE INHIBITION OF LIPOXYGENASE. J. Verhagen and J.F.G. Vliegenthart.
- 4:20 362 – SPECIFICITY OF TYPE-2 LIPOXYGENASES. G.A. Veldink, L.J.M. Spaapen, C.P.A. van Os and J.F.G. Vliegenthart.
- 4:40 363 – CHARACTERISTICS OF PURIFIED LIPOXYGENASE ISOENZYMES. Barbara P. Klein

SESSION BBB – Chemical Aspects of Lipids II

Chairmen: Frank D. Gunstone and Gerhard Maerker

2:00 p.m., Rendezvous Room

- 2:00 364 – SPECIFICITY OF HYDRAZINE REDUCTION OF ETHYLENIC BONDS AS AN AID TO THE IDENTIFICATION OF FATTY ACIDS. W.N. Ratnayake, J.S. Grossert, and R.G. Ackman
- 2:20 365 – OXIDATION OF UNSATURATED AND HYDROXY FATTY ACIDS BY RUTHENIUM TETROXIDE AND RUTHENIUM OXYANIONS. Y. Nakano and T.A. Foglia
- 2:40 366 – REACTION OF SINGLET OXYGEN WITH UNSATURATED FATTY ACIDS ADSORBED ON METAL OXIDE SURFACES. Y. Nakano, T.A. Foglia and D.A. Konen
- 3:00 367 – CARBOXYLIC ACIDS FROM THE CAUSTIC OXIDATION OF ISOTRIDECYL OXOBOTOMS. N.E. Lawson and M.J.C. Harding
- 3:20 368 – REACTION VARIABLES AFFECTING THE THERMAL ALTERATION OF METHYL OLEATE IN THE PRESENCE OF MINERAL CATALYSTS. T. Perlstein and T.A. Foglia
- 3:40 369 – SYNTHESIS OF HYDROXY FATTY ACIDS. S.R. Macaulay
- 4:00 370 – PREPARATION OF THE *cis-trans* ISOMERS OF LINOLEIC ACID. M. Naudet and J.-L. Perrin
- 4:20 371 – HYDROGENATION OF CARBOXYLIC ACIDS WITH SYNERGISTIC CATALYSTS. B.C. Trivedi, D. Grote and T.O. Mason
- 4:40 372 – THE FATE OF FATTY CYCLOPROPENONDS IN THE PRESENCE OF THE LEWIS ACID BORON TRIFLUORIDE. Ian S. Gilkison and Geoffrey G. Shone

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Thursday, May 1

SESSION CCC – General III

Chairmen: David Min and Roger Logan

9:00 a.m., Sutton Room

- 9:00 373 – HYDROPHOBIC INTERACTIONS OF PROTEINS WITH TRIGLYCERIDES. L.M. Smith, P. Fantozzi, R.K. Creveling and Robert E. Feeney
- 9:20 374 – CHLORINE-LIPID REACTIONS OCCURRING DURING THE CHLORINATION OF FLOUR. H.B.S. Conacher, B.D. Page and R.K. Chadha
- 9:40 375 – THE EFFECT OF BACTERIAL, VIRAL AND FUNGUS INFECTION ON THE FATTY ACIDS AND AMINO ACIDS OF INSECTS. A.C. Thompson and P.P. Sikorowski
- 10:00 376 – PHASE BEHAVIOR OF ETHER LIPIDS FROM *CLOSTRIDIUM BUTYRICUM*. H. Goldfine, N.C. Johnston and Michael C. Phillips
- 10:20 377 – AUTOXIDATION OF METHYL ESTERS OF CYCLOPENTENYL FATTY ACIDS. E.M. Abdel Moety and W.O. Lundberg
- 10:40 378 – INVESTIGATION INTO THE PRO-OXIDANT NATURE OF CERTAIN TRANSITION METALS. P.E. Mountjoy
- 11:00 379 – RADICAL PROCESSES IN LIPIDS. A PULSE RADIOLYSIS STUDY. L.K. Patterson and M.S. Araos
- 11:20 380 – SEPARATION OF LIGHT FRACTIONS OF SOYBEAN AND SOYBEAN MEAL IN BULK STORAGE AND INFLUENCE OF IT ON THE

QUALITY OF SOYBEAN OIL, LECITHIN AND SOYBEAN MEAL. Dusko Jericevic

- 11:40 380A – THE EFFECT OF PHOSPHOLIPID ON BINDING PROPERTIES OF A RECONSTITUTED INSULIN RECEPTOR. R.J. Gould and A.A. Spector
Honored Student presentation
- 12:00 380B – PREFERENTIAL PHOSPHOLIPASE A2 ACTIVITY AGAINST OXIDIZED PHOSPHATIDYLCHOLINE. Alex Sevanian, R.A. Stein and J.F. Mead

SESSION DDD – Analytical Methods

Chairmen: O.S. Privett and A. Sehr

9:00 a.m., Gramercy A

- 9:00 381 – MODIFICATION OF POLYUNSATURATED FATTY ACIDS DURING PARTIAL HYDROGENATION OF MENHADEN OIL WITH NICKEL CATALYST. J.-L. Sebedio and R.G. Ackman
- 9:20 382 – ANALYSIS OF "ESSENTIAL" PHOSPHOLIPIDS (EPL), A CLINICALLY USED PHARMACEUTICAL. J.G. Turcotte, J.Y.-K. Hsieh and D.K. Welsch
- 9:40 383 – IMPROVED PROCEDURE FOR TITRATING CYCLOPROPENE ESTERS WITH HYDROGEN BROMIDE. R.O. Feuge, L.P. Codifer and J.H. Zeringue, Jr.
- 10:00 384 – A TWO-STAGE, ONE-DIMENSIONAL THIN LAYER CHROMATOGRAPHIC METHOD FOR SEPARATION OF LIPID CLASSES. J. Bitman, D.L. Wood and J.M. Ruth
- 10:20 385 – FATTY ACID DATA, THEIR VARIABILITY WITH ANALYTICAL METHODOLOGY AND

Thursday (continued)

- THEIR COLLATION BY COMPUTER. J.L. Wehrauch
- 10:40 386 – CHROMATOGRAPHIC SEPARATION OF THE STEREOISOMERS OF ALPHA-TOCOPHEROL. H.T. Slover and R.H. Thompson, Jr.
- 11:00 387 – DETERMINATION OF LIPID CLASSES, USING SUBMICROLITER AMOUNTS OF PLASMA, BY THIN-LAYER CHROMATOGRAPHY AND "IN SITU" SPECTROFLUORIMETRY AFTER THERMAL TREATMENT IN THE PRESENCE OF SILICON TETRACHLORIDE. R. Segura and Xavier Navarro
- 11:20 388 – A GAS CHROMATOGRAPHIC METHOD FOR QUANTITATIVE DETERMINATION OF LONG CHAIN NON-ESTERIFIED FATTY ACIDS IN HUMAN SERUM. M. Höckel, W. Dünge, A. Holger, P. Brockerhoff and G. Rathgen
- 11:40 389 – DETECTION OF HYDROXY FATTY ACIDS IN BIOLOGICAL SAMPLES USING CAPILLARY GAS CHROMATOGRAPHY IN COMBINATION WITH POSITIVE AND NEGATIVE MASS SPECTROMETRY. H.-J. Stan and M. Scheutwinkel-Reich
- 12:00 390 – A NEW METHOD FOR THE DETERMINATION OF SMOKE POINT. A. Seher and F. Bregulla

SESSION EEE – Rapeseed Oil and Protein II

Chairmen: Paul A. Sims and Lars Appelqvist

9:00 a.m., Gramercy B

- 9:00 391 – RELATIONSHIP BETWEEN RAPESEED CHLOROPHYLL, RAPESEED OIL CHLOROPHYLL AND PERCENTAGE OF GREEN SEEDS IN RAPESEED. James K. Daun
- 9:20 392 – DESIRED QUALITY ATTRIBUTES IN WINTER AND SUMMER RAPESEED. Alfred Thomas
- 9:40 393 – RAPESEED OIL PROCESSING IN CANADA. T.K. Mag and P. Eng
- 10:00 394 – EFFECT OF RAPESEED OIL USED AS A DUST INHIBITOR ON THE COMPOSITION OF WHEAT LIPIDS. James K. Daun and Fu-hung Hsieh
- 10:20 395 – MICROWAVING RAPESEED TO INACTIVATE MYROSINASE AND ITS EFFECT ON OIL AND MEAL QUALITY. P.N. Maheshwari, D.W. Stanley and F.R. van de Voort
- 10:40 396 – PROCESSING FACTORS AFFECTED BY SULPHUR-CONTAINING COMPOUNDS OF RAPESEED. Antoni Rutkowski, Stanislaw Gwiazda and Krzysztof Krygier
- 11:00 397 – PHENOLIC ACIDS IN RAPESEEDS. H. Kozłowska, D. Rotkiewicz, F. Sosulski and R. Zadernowski
- 11:20 398 – AUTOXIDATION PROCESSES IN THE SYSTEM RAPESEED OIL/LECITHIN. Henryk Niewiadonski
- 11:40 398A – FACTORS AFFECTING QUALITY OF CRUDE AND REFINED RAPESEED OIL. Christine Kristofferson and Josef Dahlén
- 12:00 398B – PHYSICAL REFINING OF RAPESEED OIL. James J. Ledden

SESSION FFF – Flavor and Flavor Stability I

Chairmen: T.H. Smouse and P.A.T. Swoboda

9:00 a.m., Beekman Room

- 9:00 INTRODUCTION – T.H. Smouse
- 9:05 399 – FORMATION OF FLAVOR VOLATILES BY THE SELECTIVE OXIDATIVE CLEAVAGE OF UNSATURATED FATS. P.A.T. Swoboda and K.E. Peers
- 9:25 400 – FLAVOR AND OXIDATIVE STABILITY OF HYDROGENATED AND UNHYDROGENATED SOYBEAN OIL: EFFECT OF TERTIARY BUTYL HYDROQUINONE. T.L. Mounts, K. Warner and G.R. List

- 9:45 401 – CORRELATION OF GAS LIQUID CHROMATOGRAPHIC VOLATILES WITH FLAVOR INTENSITY SCORES OF STORED SUNFLOWER SEED OILS. W.H. Morrison, B.G. Lyon and J.A. Robertson
- 10:05 402 – FAT OXIDATION IN DRY WHOLE MILK. SIMULTANEOUS DIFFERENT ANTIOXIDANTS WAS STUDIED. THE POWDER WAS STORED AT 25°C IN EITHER AIR OR NITROGEN. Gunnar Hall
Honored Student presentation
- 10:25 403 – STORAGE OF BUTTER AND FAT-CONTAINING ANIMAL FOODS AT LOW TEMPERATURES. K. Porsdal Poulsen and F. Lindeløv
- 10:45 404 – A COMPARISON OF VOLATILE FLAVOR COMPOUNDS IDENTIFIED IN EXPULSED AND PRESSED COCOA BUTTER. I. BASIC COMPOUNDS. K.N. Lee, L.S. Hwang, J.T. Carlin, O. Hsieh and Stephen S. Chang
- 11:05 405 – A COMPARISON OF THE VOLATILE FLAVOR COMPOUNDS IDENTIFIED IN EXPULSED AND PRESSED COCOA BUTTER. II. ACIDIC AND NEUTRAL COMPOUNDS. J.T. Carlin, K.N.S. Lee and Stephen S. Chang
Honored Student presentation
- 11:25 406 – EFFECT OF POLAR MINOR CONSTITUENTS ON THE FLAVOR STABILITY OF SOYBEAN OIL. J.L. Williams and R.G. Krishnamurthy
- 11:45 407 – PROGRESS REPORT OF THE AOCS FLAVOR NOMENCLATURE AND STANDARDS SUB-COMMITTEE. Arthur E. Waltking

SESSION GGG – Nutrition II

Chairmen: David Kritchevsky and Anders Gustafson

9:00 a.m., Regent Room

- 9:00 408 – THE USAFSAM CARDIOVASCULAR DISEASE FOLLOW-UP STUDY: CHOLESTEROL AND HDL LEVELS IN SUBJECTS WITH MYOCARDIAL INFARCTION. D.A. Clark, F.H. Wilson and Joel Michalek
- 9:20 409 – EFFECTS OF DIETARY FATS AND PHYSICAL TRAINING ON CARDIAC PHOSPHOLIPIDS IN RATS (1). G. Rocquelin and P. Juaneda
- 9:40 410 – COMPARATIVE STUDY OF THE CARDIAC LIPIDS OF RATS FED DIFFERENT VEGETABLE OILS. J.K.G. Kramer
- 10:00 411 – THE GLYCERIDE COMPOSITION OF A FOOD FAT, AS WELL AS ITS FATTY ACID COMPOSITION, INFLUENCES SERUM CHOLESTEROL AND SERUM HDL-CHOLESTEROL LEVELS IN MAN. A. Christophe and G. Verdonk
- 10:20 412 – CHANGES OF THE CONCENTRATION OF SERUM TOTAL CHOLESTEROL AND HDL-CHOLESTEROL DURING STARVATION IN OBESE SUBJECTS. A. Christophe and G. Verdonk
- 10:40 413 – COMPARATIVE STUDY OF TRIACYLGLYCEROLS OF VERY LOW DENSITY LIPOPROTEINS (VLDL) OF NORMAL SUBJECTS AND PATIENTS WITH HYPERLIPEMIA. J.J. Myher, A. Kuksis, W.C. Breckenridge and J.A. Little
- 11:00 414 – REGULATION OF HEPATIC LIPOGENESIS BY POLYUNSATURATED DIET FAT. B.C. O'Brien and R. Reiser
- 11:20 415 – THE DIETARY CONTROL OF HEPATIC LIPOGENESIS BY POLYUNSATURATED FATTY ACIDS. R. Jeffcoat and A.T. James
- 11:40 416 – THE USE OF MONOGLYCERIDE IN CHEMICALLY DEFINED DIETS. D. Lekim and M. Stahl
- 12:00 417 – NUTRITIONAL QUALITY OF INTERESTERIFIED FAT PRODUCTS. D.K. Bhattacharyya, M.M. Chakrabarty and K. Kar

Continued on page 104A.

Thursday (continued)**SESSION HHH – New Sources of Fats and Oils II****Chairmen: E.H. Pryde and K.H. Mangold****9:00 a.m., Murray Hill A**

- 9:00 418 – THE BUFFALO GOURD, *CUCURBITA FOETIDISSIMA*, AS A SOURCE OF EDIBLE VEGETABLE OIL. J.A. Vasconcellos, W.P. Bemis, J.W. Berry and C.W. Weber
- 9:20 419 – SUNFLOWER – A NEW MAJOR OILSEED CROP IN THE UNITED STATES. D.C. Zimmerman
- 9:40 420 – PLANT BREEDING AND ENGINEERING RESEARCH FOR THE DEVELOPMENT OF SESAME AS A COMMERCIAL CROP. D.M. Yermanos
- 10:00 421 – MANGO FAT. S.M. Osman
- 10:20 422 – *LUPINUS MUTABILIS* SWEET – A POTENTIAL FOOD OIL AND PROTEIN SOURCE. A.M. Davis
- 10:40 423 – LIPIDS FROM MICROORGANISMS, ESP. METHYLOMONAS CLARA. M. Schlingmann and U. Faust
- 11:00 424 – UNUSUAL SEED OILS AND THEIR FATTY ACIDS. C.R. Smith, Jr.
- 11:20 425 – LIMNANTHES: CURRENT STATUS OF AGRONOMIC PRODUCTION. G.D. Jolliff, W. Calhoun and J.M. Crane
- 11:40 426 – THE WILD CUCURBIT, *APODANTHERA UNDULATA*, AS A NEW PLANT SOURCE OF VEGETABLE OIL. J.A. Vasconcellos, W.P. Bemis, J.W. Berry and C.W. Weber
- 12:00 427 – *STOKESIA LAEVIS*: A POTENTIAL NEW SOURCE OF EPOXY ACID. T.A. Campbell

SESSION III – Oil Seed Protein**Chairmen: E.W. Lusas and Ragnar J. Ohlson****9:00 a.m., Murray Hill B**

- 9:00 INTRODUCTION – E.W. Lusas
- 9:05 428 – AN IMPROVED METHOD OF OILSEED EXTRACTION (ESPECIALLY FROM COTTONSEEDS). Dan Ram
- 9:25 429 – A PILOT PLANT AND LABORATORY STUDY OF THE DESOLVENTIZATION OF CANOLA MEALS. John A. Blake and Myles N. Marianchuk
- 9:45 430 – PROPERTIES OF PEANUT PROTEINS FOR FOOD APPLICATION. Robert L. Ory and Edith J. Conkerton
- 10:05 431 – AMARANTH GRAIN: A POTENTIAL SOURCE OF HIGH QUALITY FOOD PROTEIN. Joseph P. Senft and Charles S. Kauffman
- 10:25 432 – EFFECT OF SUCCINYLACTION OF COTTONSEED PROTEINS DURING EXTRACTION ON THE YIELD AND CHEMICAL AND FUNCTIONAL PROPERTIES OF ISOLATES. Y.R. Choi, E.W. Lusas and K.C. Rhee
- 10:45 433 – UTILIZATION OF MEMBRANE-PRODUCED OILSEED ISOLATES IN FROZEN DESSERTS. J.T. Lawhon, N.H. Golightly and E.W. Lusas
- 11:05 434 – SOME TECHNOLOGICAL ASPECTS OF THE PREPARATION OF SUNFLOWER PROTEIN CONCENTRATES. Janos Stroszel and Jelena Dominec
- 11:25 435 – PROTEIN QUALITY OF PEANUTS AS INFLUENCED BY CULTIVAR AND LOCATION OF PRODUCTION. Josephine Miller and Timothy H. Saunders
- 11:45 436 – SEED PROTEINS IN CULTIVATED PEANUTS: AN IMMUNOCHEMICAL/ELECTROPHORETIC STUDY. Navin J. Neucere
- 12:05 437 – SOY PROTEIN CONCENTRATE BY EXTRACTION WITH AQUEOUS ALCOHOLS. George Karnofsky

SESSION JJJ – Adsorption in Oil Processing (Environmental Concerns – II)**Chairmen: Ernst H. Goebel and A.K. Sen Gupta****9:00 a.m., Gibson A&B**

- 9:00 INTRODUCTION – Ernst H. Goebel
- 9:05 438 – ADSORPTIVE REFINING OF EDIBLE OILS. A.K. Sen Gupta
- 9:45 439 – USE OF ACTIVATED CARBON FOR REFINING OF EDIBLE OILS. H.H.R.H. Wendt
- 10:05 440 – SOME ASPECTS OF ADSORBENT TREATMENT AND HYDROGENATION OF FISH OIL. E.H. Goebel and Miguel Romero
- 10:25 441 – CONTROL OF FREE FATTY ACID RISE IN CLAY-TREATED VEGETABLE OILS. D.R. Taylor, B.A. Root and C.B. Ungermann
- 10:45 442 – OIL RECOVERY FROM BLEACHING CLAY BY A THREE PHASES EXTRACTION AND SEPARATION COLUMN. K. Weber
- Break*
- 11:05 ENVIRONMENTAL CONCERNS – II. Chairmen: Frank B. White and Ingemar Folkesson
- 11:15 443 – OIL REMOVAL AT MUNICIPAL WASTEWATER TREATMENT PLANTS. G.N. McDermott
- 11:35 444 – ENVIRONMENTAL REGULATION IN EUROPEAN COUNTRIES. Gustaf Blidberg

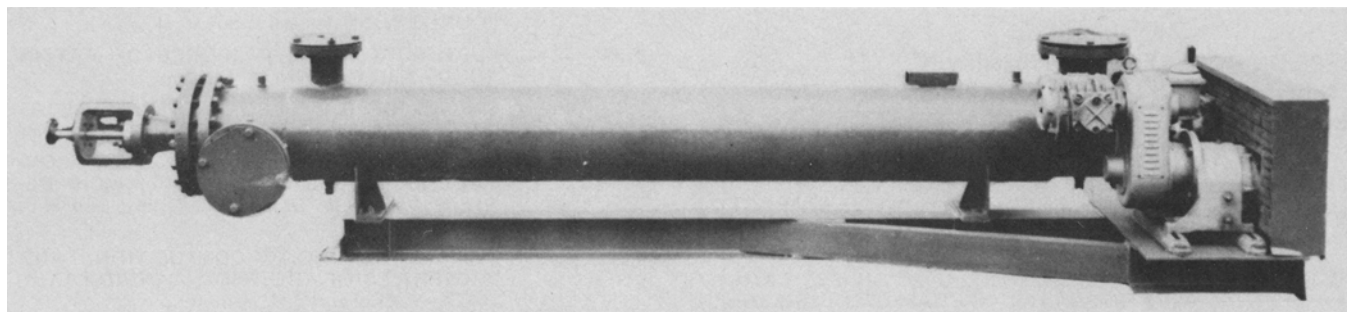
SESSION KKK – Safety In Processing I**Chairmen: C.L. Kingsbaker and Roger Leysen****9:00 a.m., Mercury Ballroom**

- 9:00 INTRODUCTION – C.L. Kingsbaker
- 9:05 445 – CRITICAL SAFETY DEVICES. H. Sandvig
- 9:25 446 – DUST EXPLOSIONS IN OILSEED PLANTS. Dr. Ing. Radant
- 9:45 447 – EXTRACTION PLANT PURGING. M. Woods
- 10:05 448 – EXPLANATION, QUESTIONS, AND DISCUSSION OF BOOKLET, NFPA NO. 36, SOLVENT EXTRACTION PLANTS. C.L. Kingsbaker
- 10:25 ROUND TABLE DISCUSSION

SESSION LLL – General IV**Chairmen: Frank Vallese and Oliver A.L. Hsieh****2:00 p.m., Sutton Room**

- 2:00 449 – BUTYDIMETHYLSILYL ETHERS OF HYDROXY ESTERS AND IODINE-CATALYZED SOLVOLYSIS PRODUCTS OF LONG-CHAIN EPOXIDES. D.E. Minnikin and S.M. Minnikin
- 2:20 450 – STUDIES ON THE INHIBITION OF LIPID PEROXIDATION IN RAT LIVER MICROSOMES. T.F. Slater, R.L. Willson, and J. Packer
- 2:40 451 – ACETOLYSIS OF GLYCOPHOSPHOLIPIDS. N. Shawn
- 3:00 452 – APOLAR INTERACTIONS IN THE BIOSYNTHESIS OF LIPIDS. I. ARRANGEMENT OF ACYL CHAINS IN EUTECTICS OF FATTY ACIDS. Damascene Rebello and Kalpana J. Modi
- 3:20 453 – APOLAR INTERACTIONS IN THE BIOSYNTHESIS OF LIPIDS. II. A NEW MECHANISM OF *DE NOVO* BIOSYNTHESIS OF LIPIDS FROM POOLS OF PREARRANGED FATTY ACIDS. Damascene Rebello
- 3:40 453A – STUDIES ON THE CONTENT AND HYDROGENATION CONDITION OF SQUALENE FROM THE LIVER OF DEEP SEA SHARK. Ching-Shyong Wu
- 4:00 453B – STILLINGIA OIL – A GOOD SUBSTITUTE FOR TUNG OIL. Kan Ching-Hao, Liao Mei-teh and Hu Ping-huang
- 4:20 453C – CHINESE VEGETABLE FOOD COLORS. Kan Ching-hao, Cheng Mon-hua and Lin Chung-juan

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4:40 453D – CONCAVALIN A-MEDICATED AGGLUTINABILITY OF BALB 3T3 CELLS GROWN IN MEDIA SUPPLEMENTED WITH VARIOUS PHOSPHATIDYLCHOLINE MOLECULAR SPECIES. Salvatore Ruggieri, Donatella Tombacini, Anna Faliani and Gabriele Mugnai

SESSION MMM – Lipids in Art

Chairmen: Andrea Paleni and Stefan C. Arteni

2:00 p.m., Gramercy A

- 2:00 454 – LIPIDS IN STONE – II. DETERMINATION OF FATTY ACIDS IN THE WEATHERED STONE OF SOME ITALIAN MONUMENTS. B. Sergio Curri and A. Paleni
- 2:20 455A – NOTES ON THE EVOLUTION OF OIL PAINTING. Meryl Johnson
- 2:40 454B – LINSEED OIL AND RELATED MATERIALS: AN ANNOTATED BIBLIOGRAPHY OF MONOGRAPHS. N.S. Baer, N. Indictor and R. Rushfield
- 3:00 454C – THERMOGRAVIMETRY OF LINSEED OIL IN THE PRESENCE OF IRON-BASE, COPPER-BASE AND CARBON BLACK PIGMENTS. N. Indictor, C.J. Shahani, M.J.D. Low, J. Chan and N.S. Baer
- 3:20 454D – CRITICAL EVALUATION OF PUBLISHED DATA ON THE COMPOSITION OF ANCIENT MATERIALS. SOME QUESTIONS OF RESEARCH AND PRACTICE. Stefan C. Arteni
- 3:40 454E – DRAWING MATERIALS. A PRELIMINARY STUDY, RESTORATION PROBLEMS OF DRAWINGS EXECUTED IN MIXED TECHNIQUES. Stefan C. Arteni and Myriam Sanchez-Posada de Arteni
- 4:00 454F – TECHNOLOGICAL INNOVATION AND MANUFACTURE OF OIL PAINTING MATERIALS: EVOLUTION FROM HAND-CRAFT TO MASS PRODUCTION. Stefan C. Arteni

4:20 454G – 1968 START RESEARCH OF LIPIDS ON WORKS OF ART. Andrea Paleni

SESSION NNN – Biochemistry of Lipids

Chairmen: L.A. Witting and P. Desnuelle

2:00 p.m., Gramercy B

- 2:00 455 – RICINOLEIC ACID IN *PHYLLANTHUS NIRURI* (EUPHORBIACEAE) SEED OIL. S.K. Husain, M.U. Admad, and S.M. Osman
- 2:20 456 – POSITIONAL ISOMERS OF HEXADECE-NOATES ISOLATED FROM LIVER AND HEPATOMA LIPIDS. R. Wood and T. Lee
- 2:40 457 – STEREOSPECIFICITY OF DIFFERENT LI-PASES. B. Akesson, S. Gronowitz, B. Herslof, P. Michelsen and T. Olivecrona
- 3:00 458 – HORMONAL REGULATION OF $\Delta 5$ DESATURATION OF FATTY ACIDS. R.R. Brenner, I.N.T. de Gomez Dumm and Maria J.T. de Alaniz
- 3:20 459 – FURTHER STUDIES ON THE BIOCHEMICAL AND PHARMACOLOGICAL ANTAGONISM OF THE UNSATURATED AND SATURATED FATTY ACIDS IN SUPPORT OF REVICI'S DUALISM. Benedict B. O'Malley
- 3:40 460 – LIPID BIOSYNTHESIS IN DEVELOPING SUNFLOWER (*HELIANTHUS ANNUUS*) SEEDS. M. Mancha and J. Sanchez
- 4:00 461 – PRELIMINARY IDENTIFICATION OF A MONOVINYL-ETHER, MONOFATTY-ACYL PHOSPHOGLYCERIDE FROM *T. VIVAX* BY PAPER CHROMATOGRAPHY. Gregory E. Anekwe
- 4:20 462 – PHYSICO-CHEMICAL STUDIES ON THE SULFONIUM ANALOG OF LECITHIN IN DIATOMS. M. Kates and P.A. Tremblay
- 4:40 463 – THE TRIGLYCERIDES OF SAPROPHYTIC MYCOBACTERIA. T.V. Koronelli and B.V. Rozynov

Thursday (continued)**SESSION OOO – Flavor and Stability II****Chairmen: T.H. Smouse and P.A.T. Swoboda****2:00 p.m., Beekman Room**

- 2:00 463A – LIPOXYGENASE: ITS IMPORTANCE IN FLAVOR FORMATION. Stan Kazeniac
- 2:20 464 – INVESTIGATIONS ON OXIDATIVE STABILITY AND ITS KINETIC CONTROL IN SOME FATTY FISH LIPIDS. J.K. Kaitaranta and P.J. Ke
- 2:40 465 – THE EFFECT OF DOCKAGE ON THE OXIDATIVE STABILITY OF RAPESEED OIL. N.A. Michael Eskin, F. Ismail and M. Vaisey-Genser
- 3:00 466 – EFFECT OF PEROXY RADICAL SCAVENGERS ON FLUORESCENT LIGHT-INDUCED OXIDATION IN SOME EDIBLE OILS. P. Akhtar, A. Asghar and Abdus-Salam Sheikh
- 3:20 467 – APPLICATION OF THE FLUORESCENT LIGHT TEST AND SOME OTHER METHODS FOR DETERMINATION OF THE STABILITY OF DIFFERENT EDIBLE OILS. Biserka Matigasuc, Jovan Turkulov, Djerdj Karlovic and Vjera Radenkovic
- 3:40 467A – ANTIOXIDANT FROM FERMENTED BLACK SOYBEAN. T.Y. Liu and H.J. Chen
- 4:00 467B – POTENTIAL ANTIOXIDANTS FROM *PIPER BETLE* L. W.H. Chang and K.S. Wang

SESSION PPP – Nutrition III**Chairmen: R.B. Alfin-Slater and E. Aaes Jørgensen****2:00 p.m., Regent Room**

- 2:00 468 – THE ROLE OF PROTEIN IN INTESTINAL FATTY ACID ABSORPTION. D. Sklan
- 2:20 469 – PHOSPHOLIPIDS AND FATTY ACID CHANGES IN PERIPHERAL NERVE DURING WALLERIAN DEGENERATION. J.K. Yao, V. Natarajan, H. Schmid and Peter James Dyck
- 2:40 470 – AORTIC GLYCOSAMINOGLYCAN CHANGES IN RABBITS FED SEMIPURIFIED DIET: EFFECTS OF SUCROSE AND LACTOSE, Janet L. De Hoff and David Kritchevsky
Honored Student presentation
- 3:00 471 – MONOGLYCERIDES AS FOOD FAT FOR THE SUPPLY OF ESSENTIAL FATTY ACIDS IN CONDITIONS OF IMPAIRED LYMPHATIC FAT TRANSPORT. A. Christophe and G. Verdonk
- 3:20 472 – SPECIFIC CHANGES OF BILE ACID METABOLISM IN SPONTANEOUSLY DIABETIC WISTAR RATS. A. Hassan, M.T.R. Subbiah and P. Thiebert
- 3:40 473 – THE ROLE OF LIVER PEROXISOMAL β -OXIDATION IN THE METABOLISM OF VERY LONG-CHAIN MONOUNSATURATED FATTY ACIDS. M.S. Thomassen, C.E. Neat, H. Osmundsen, E.N. Christiansen and K.R. Norum
- 4:00 474 – METABOLIC SIGNIFICANCE OF PEROXISOMAL β -OXIDATION. H. Osmundsen and C.E. Neat
- 4:20 475 – NUTRITIONAL STUDIES OF BI-CYCLIZED FATTY ACIDS IN THE RAT. A. Hase and L. Pekkanen
- 4:40 476 – RESULTS FROM SUBSISTING ON AN ESKIMO DIET FOR 100 DAYS. H.M. Sinclair

SESSION QQQ – New Sources of Fats and Oils III**Chairmen: E.H. Pryde and H.K. Mangold****2:00 p.m., Murray Hill A**

- 2:00 477 – *VERNONIA GALAMENSIS* SEED OIL: A NEW SOURCE FOR EPOXY COATINGS. K.D. Carlson, W.J. Schneider and L.H. Princen
- 2:20 478 – CRAMBE. K.J. Lessman and W. Powell Anderson
- 2:40 479 – JOJOBA – A CROP WHOSE TIME HAS COME. D.M. Yermanos

- 3:00 480 – MACADAMIA NUTS AS AN EDIBLE OIL SOURCE. N. Macfarlane and R.V. Harris
- 3:20 481 – PURE BUTTERFAT, A SOURCE OF FAT IN FOOD FABRICATION. H. Timmen
- 3:40 482 – SPECIES OF RAPESEED AND MUSTARD AS OIL CROPS IN CALIFORNIA. P.F. Knowles
- 4:00 483 – A NEW CLASS OF NITROGEN/SULFUR-CONTAINING HETEROCYCLIC FATTY ACID DERIVATIVES. S.M. Osman, W. Pimlott and N.F. Ahmad
- 4:20 484 – THE EXTRACTION, COMPOSITION AND PROPERTIES OF OIL FROM *CANDIDA CURVATA*. Y. Choi and E.G. Hammond
- 4:40 485 – ENVIRONMENTAL VARIABILITY IN OIL CONTENT AND COMPOSITION IN JOJOBA SEED (*SIMMONDSIA CHINENSIS*). Alfredo J. Salazar-Zazueta

SESSION RRR – Fatty Acids**Chairmen: Earl Fritz and W. Stein****2:00 p.m., Murray Hill B**

- 2:00 486 – TALL OIL – THE MAJOR RENEWABLE RAW MATERIAL FOR FATTY CHEMICALS. E.E. McSweeney
- 2:20 487 – THE OXIDATION PRODUCTS OF *trans*-3, 5-DIMETHOXYSTILBENE. R.P. Scharrer and M. Epstein
- 2:40 488 – A NEW FAMILY OF CHEMICAL COMPOUNDS HAVING AMPHOLYTIC PROPERTIES. J.B. Braunwarth, L.J. Armstrong and Gerald A. Churchill
- 3:00 489 – A GPC-STUDY ON THE EFFECT OF MOLECULAR MASS AND CONTENT OF OLIGOMERS FORMED DURING HEATING OF DISTILLED FFA ON THEIR DISCOLORATION. K. Krygier, J. Brzezinski and Antoni Rutkowski
- 3:20 490 – ENERGY CONSERVATION AND ENVIRONMENTAL ASPECTS IN THE MANUFACTURE OF FAT-BASED CHEMICAL PRODUCTS. Gerhard Diekelman

SESSION SSS – Autoxidation IV (Stability-Interactions)**Chairmen: E.N. Frankel and H.E. Pattee****2:00 p.m., Gibson A&B**

- 2:00 491 – STORAGE EFFECTS ON THE LIPID OXIDATION SYSTEM OF PEANUTS. John A. Singleton and Harold E. Pattee
- 2:20 492 – COVALENT BINDING OF PEROXIDIZED PHOSPHOLIPIDS TO PROTEINS. H. Nielsen
- 2:40 493 – DECOMPOSITION OF POLYUNSATURATED HYDROPEROXIDES INDUCED BY METALS AND ANTIOXIDANTS. P.A.T. Swoboda and D.A. Hammond
- 3:00 494 – FERRIC IRON DEPENDENT LIPID PEROXIDATION AS A FUNCTION OF PH. Ming Tien, Bruce A. Syngen and Steven D. Aust
- 3:20 495 – INFLUENCE OF LIPID PEROXIDATION ON PROTEIN AND LIPOPROTEIN SECRETION FROM ISOLATED HEPATOCYTES. Mario U. Dianzani, Enrico Gravela, Giuseppe Poli, Emanuele Albano, Elena Chiarotto and Luciana Paradisi
- 3:40 496 – AUTOXYDATION OF VEGETABLE OILS IN PRESENCE OF AMINO ACIDS AND CARBOHYDRATES. Enzo Fedeli and Ada Gasparoli
- 4:00 497 – FLUORESCENCE TEST OF OXIDATIVE ABUSE STATUS OF FATS, OILS AND DRY WHOLE TISSUE. William L. Porter, Ann Marie Wetherby and John G. Kapsalis
- 4:20 498 – FOOD QUALITY AS AFFECTED BY EXPOSURE TO ALDEHYDES FROM THE SECONDARY DEGRADATION PRODUCTS OF HYDROPEROXIDES. Salwa El-Magoli

Continued on page 108A.

Thursday (continued)

SESSION TTT – Safety in Processing II

Chairmen: C.L. Kingsbaker and Roger Leyson

2:00 p.m., Mercury Ballroom

2:00 499 – EUROPEAN SAFETY STANDARDS. A. Robinson

2:20 500 – DEMONSTRATION OF THE HAZARDS OF HEXANE. L.J. Donnell

ROUND TABLE DISCUSSION

Poster sessions

MONDAY – APRIL 28**POSTER SESSION A**

2:00 p.m., Rhinelander Gallery South

- P1 CONCENTRATION DEPENDENTS EFFECTS OF STEROL INHIBITORS UPON THE PATTERN OF BRAIN STEROL BIOSYNTHESIS. Richard J. Cenedella
- P2 EXAMINATION OF SELF-ASSOCIATION WITH THE SELECTED ALIPHATIC COMPOUNDS. Jozef Sliwiok, Teresa Kowalska, Halina Czarniecka and Babara Korczak
- P3 MICROBIOLOGICAL STUDIES INVESTIGATING MUTAGENICITY OF DEEP FRYING FAT FRACTIONS AND SOME OF THEIR COMPONENTS. M. Scheutwinkel-Reich, G. Ingerowski and H.J. Stan
- P4 THE EFFECT OF ETHANOL ON THE CONSTITUENTS OF THE GASTRIC MUCOUS BARRIER. Bronislaw L. Slomiany, Amalia Slomiany and George B.J. Glass
- P5 FATTY ACIDS OF THE MALE REPRODUCTIVE TRACT OF THE DOMESTIC CRICKET (*ACHETA DOMESTICUS*) AND FIELD CRICKET (*GRYLLUS SPP.*). R.E. Worthington, U.E. Brady, J.E. Thean and D.M. Wilson, Jr.
- P6 A NEW ENERGY-SAVING PROCESS FOR THE PRODUCTION OF CRUDE OIL WITH EXTREMELY LOW ANISIDIN- AND PEROXIDE-NUMBERS. Thorsten Homann, Manfred Knuth and Wolfgang Stein

TUESDAY – APRIL 29**POSTER SESSION B**

10:00 a.m., Rhinelander Gallery South

- P7 ASSESSMENT OF HUMAN LUNG MATURITY IN UTERO BY TAPPING TEST. Eric J. Sing
- P8 CHOLESTEROL AND CHOLESTERYL ESTER FATTY ACIDS IN HUMAN MILK. R.M. Clark, A. Ferris, N. Fey and Robert G. Jensen
- P9 FLUOROMETRIC STUDIES ON HUMAN AND BABOON LIPOPROTEINS. J.E. Rudzki, A.W. Kruski and Paul M. Horowitz
- P10 DIETARY ARACHIDONIC ACID REDUCES FATTY LIVER, INCREASES DIET CONSUMPTION AND WEIGHT GAIN IN ETHANOL-FED RATS. S.C. Goheen, E.C. Larkin, M. Manix and G. Anada Rao
- P11 VARIABILITY OF DAILY URINARY EXCRETION RATES OF PROSTAGLANDINS E₂ AND F_{2α} IN MALE SUBJECTS. Aldo Ferretti
- P12 INVESTIGATION OF HYDROPHOBIC PROPERTIES OF HIGHER FATTY ALCOHOLS AND ACIDS. J. Sliwiok, B. Kocjan, J. Szulik and Teresa Kowalska

POSTER SESSION C

2:00 p.m., Rhinelander Gallery South

- P13 IDENTITY OF CHOLESTERYL ESTERS AND STRUCTURE OF PHOSPHATIDYL CHOLINES AND TRIACYLGLYCEROLS IN TYPES IIb AND IV HYPERLIPIDEMIA. Robert G. Jensen, Richard M. Clark, Leslie Gerhard and Mark B. Fey
- P14 CONVERSION OF VISUAL TO INSTRUMENTAL METHODS OF MEASUREMENT OF YELLOWNESS OF OILS AND LIQUIDS. Richard S. Hunter
- P15 ISOLATION OF NERVONIC ACID FROM RAT ERYTHROCYTE LIPIDS BY THIN LAYER CHROMATOGRAPHY. G. Ananda Rao, Steven C. Goheen, Robert L. Kilpatrick and Edward C. Larkin
- P16 IMPORTANCE OF THE ΔR_M AND ΔLOG TO τ_R COEFFICIENT VALUES IN GROUP IDENTIFICATION OF HIGHER FATTY ALCOHOLS, HIGHER FATTY ACIDS AND THEIR ETHYL ESTERS IN TLC AND GC. Halina Czarniecka and Jozef Sliwiok
- P17 ELAIDIC ACID UPTAKE AND OXIDATION BY EHRlich ASCITES TUMOR CELLS. Atif B. Awad
- P18 MAMMARY DYSPLASIA: α-TOCOPHEROL THERAPY, SERUM HORMONES AND LIPIDS. G.S. Sundaram, R. London, D. Strummer, P.P. Nair, S. Margolis and P. Goldstein

WEDNESDAY – APRIL 30**POSTER SESSION D**

10:00 a.m., Rhinelander Gallery South

- P19 NEUTRAL AND ACIDIC GLYCOSPHINGOLIPIDS OF GUINEA PIG GASTRIC MUCOSA. K. Kojima, A. Slomiany, V.L.N. Murty, N.I. Galicki and B.L. Slomiany
- P20 INCIDENCE AND SEVERITY OF EXPERIMENTAL ALLERGIC ENCEPHALOMYELITIS IN VITAMIN E DEFICIENT RATS. M.S. Calvo, D.L. Travis and P.V. Johnston
- P21 EFFECT OF LONG TERM FEEDING OF DIETARY CHOLESTEROL AND SATURATION OF FAT ON BABOON HIGH DENSITY LIPOPROTEINS. A.W. Kruski, G.E. Mott and Henry G. McGill
- P22 THE INFLUENCE OF AN ASSOCIATION TYPE ON THE NATURE OF SECONDARY AUTOXIDATION PRODUCTS WITH SEVERAL *cis*-OCTADECENE-9 DERIVATIVES. J. Sliwiok, J. Rzepa, J. Szulik and Bozena Kocjan
- P23 TIRTAUX FRACTIONATION: THE FLEXIBLE WAY TO NEW FATS. Alain Tirtiaux

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